

# ALL HANDS

MAGAZINE OF THE U.S. NAVY

APRIL 1999



S U B M A R I N E R S

## SAILORS UNSEEN



## Features

### 12 Haze Gray and Changing Ways

Newly appointed Secretary of the Navy Richard Danzig speaks out about his commitment to improve your Navy.

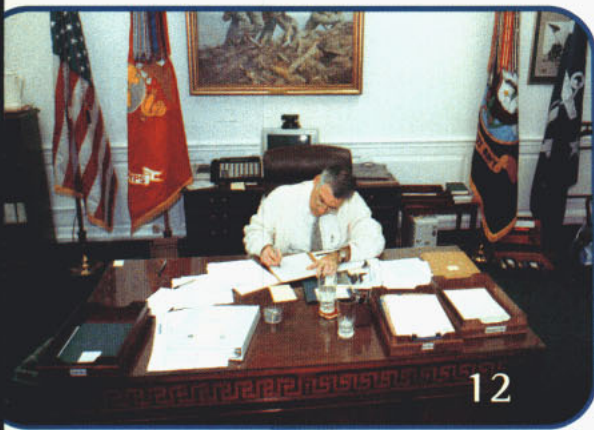


Photo by JO2 Jerome Allen

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### 16 Polar Pioneers

In the late 19th century, there were only a handful of unexplored frontiers left on Earth. But on April 6, 1909 – after CDR Robert E. Peary trekked across the vast expanse of ice and planted the American flag on our planet's northernmost point – there was one fewer. Fifty years later another group of explorers would reach the pole – this time from under the ice.

### 18 Water Level Rising

A pipe has ruptured and cold water is filling the submarine's engine room faster than a fire hose could fill a plastic kiddie pool. The wet trainer at Naval Submarine



Photo by JO1 Robert Benson

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School, Groton, Conn. – like everything else that is taught there – may be simulated, but that doesn't make it any less real. Welcome to what Sailors call "SUBSCOL" – the cradle of the submarine community.

### 24 Under the Water, Under the Spell

Come aboard this underwater behemoth, a modern U.S. Navy ballistic missile submarine, and see how Sailors live a unique life under the waves.

Secretary of the Navy  
The Honorable Richard Danzig

Chief of Naval Operations  
ADM Jay L. Johnson

Chief of Information  
RADM Thomas Jurkowski

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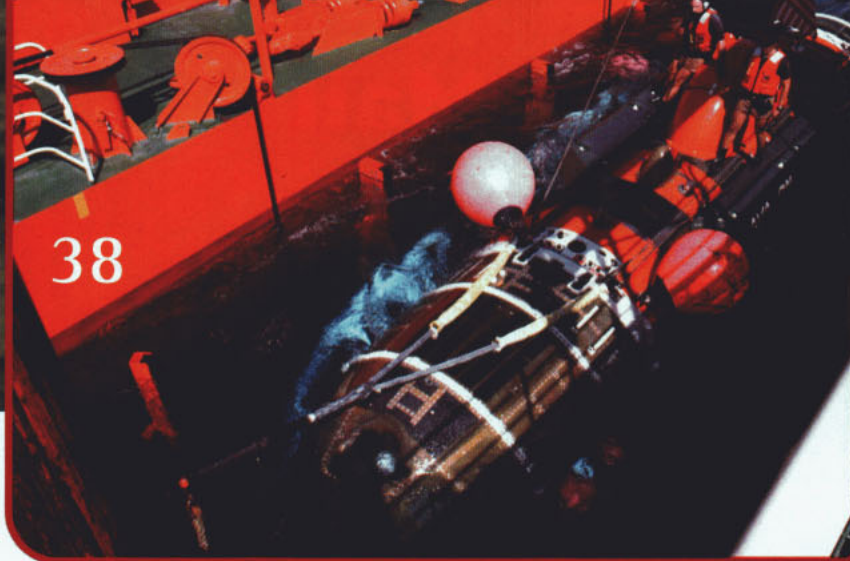
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This month we highlight the sub community. Look to pick up another special issue in April 2000 when we celebrate the Submarine Navy's 100 years of service.

Photo by JO1 Rodney Furry



**30 COB: Chief of the Boat**  
Don't call him sir, don't call him senior chief, and don't call him mister; this submariner who oversees the welfare of the crew occupies a special place on board the boat. He's known simply as "COB," don't forget it.

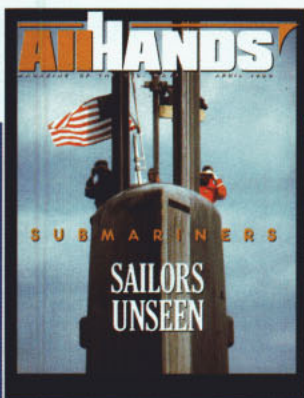
**34 The Fixer**  
For every sub in need, there's a surface unit not far away. They're called submarine tenders and their mission is to support the silent service.

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A team of Navy and civilian research scientists get underway aboard USS *Hawkbill* (SSN 666) for the fourth of five Arctic science expeditions (SCICEX) designed to collect information about the polar ice caps.

**38 'Deep Blue' Angels**  
Though few in number, deep submergence rescue vehicles (DSRVs) provide a much-appreciated insurance policy for submariners all over the world.

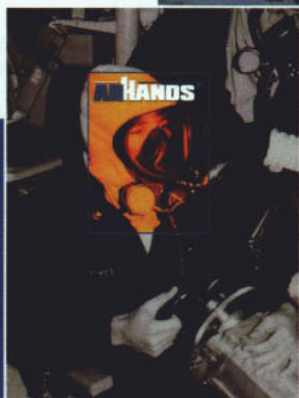


U.S. Navy Photo



**On the Cover**  
Sailors of USS *Louisiana* (SSBN 743) scan the horizon while surfaced 11 miles off the coast of Florida.

Photo by JO1 Robert Benson



**On the Back Cover**  
Sailors man their posts in the ship control station during a security drill on board USS *Pennsylvania* (SSBN 735).

Photo by Larry Smith

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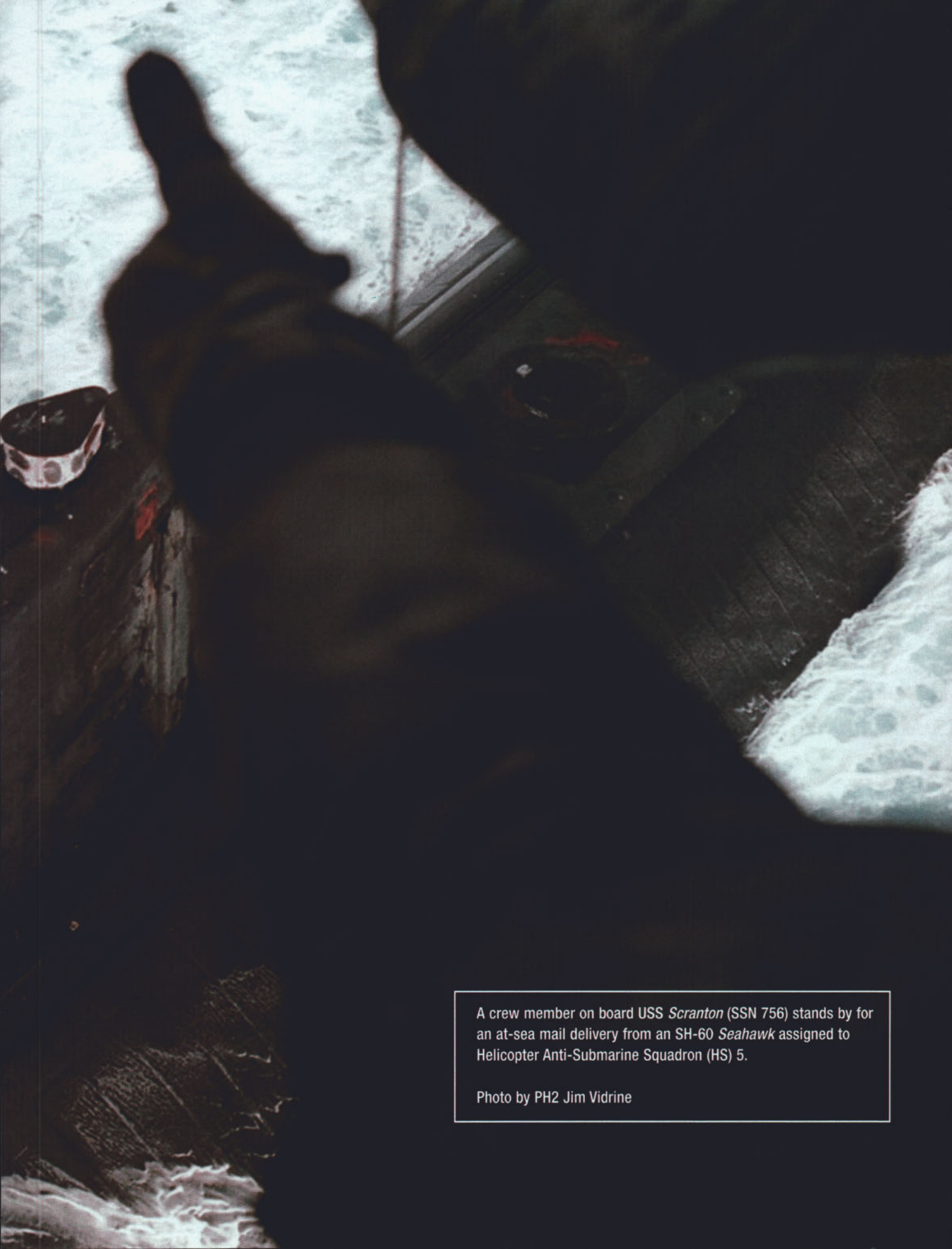
[www.chinfo.navy.mil/navpalib/allhands/ah-top.html](http://www.chinfo.navy.mil/navpalib/allhands/ah-top.html)



Sail | **Mail**







A crew member on board USS *Scranton* (SSN 756) stands by for an at-sea mail delivery from an SH-60 *Seahawk* assigned to Helicopter Anti-Submarine Squadron (HS) 5.

Photo by PH2 Jim Vidrine



In your **Face**







STS1(SS) Scott Pitre (left) and SK3 Gregory Hurst scan the horizon aboard USS *Louisiana* (SSBN 743). The Navy's newest *Ohio*-class submarine got a real stress test from Mother Nature when eight-foot waves pounded her hull during pre-deployment sea trials. *Louisiana* is the final ship of the class to be commissioned.

Photo by J01 Robert Benson



# Letters

## Backwards

Great info in this month's issue, however, I would like to call your attention to Page 35, the symbol for "INTELLIGENCE TECHNICIAN" has been transposed. It should look just like the symbol for "INTELLIGENCE SPECIALIST" varying only in color, enlisted emblem is silver, the WARRANT OFFICER insignia is gold. The magnifying glass should point to the right (while looking at the insignia) and the quill to the left.

ISCS(SW/AW) Gary L. Bernhard  
Office of Naval Intelligence  
Washington, D.C.

## RDC

While perusing the January edition of *All Hands* I noticed an error in the Warfare Pins and Badges section on Page 41. The badge on the third row far right is labeled as "Recruit Company Commander" and indeed shows the old "Recruit Company Commander" badge.

I have been the RDC "C" School Division Officer since November 1996 and am informing you of a change. Recruit Company Commanders were redesignated "Recruit Division Commanders" or RDCs in early 1996 as part of an effort to incorporate fleet language, i.e., division vice company, into

Boot Camp. Both the title and badge were changed to reflect this. There are no more Company Commanders.

LT Jeff Caulk  
Recruit Training Command  
Great Lakes, Ill.

## Merchant Sailors

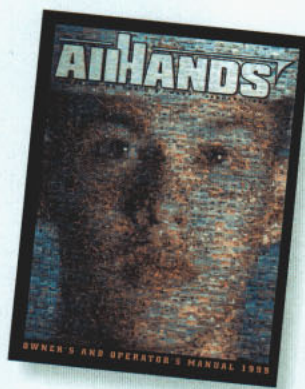
I am a lieutenant junior grade in the Naval Reserve, and a captain in the U.S. Merchant Marine.

[In] the January 1999 edition, you have warfare pins displayed from various communities. The very last warfare pin displayed on Page 40 is labeled correctly. It is a Naval Reserve pin as labeled, but it gives the impression that this pin would cover the entire Naval Reserve. As a Merchant Marine who is proud to have earned and wear this, it should be specifically displayed as a "Merchant Marine, Naval Reserve" device.

LTJG Roger G. Loving  
Acadia AD-42,  
Det. 13,  
Bossier City, La.

## Simply Professional

The January 1999 issue is superb! As an NROTC instructor at Duke University, I use the January issue each



year as one of the texts for the Naval Orientation course that all MIDN 4/C take. The photographs are terrific, but even better are the lists of ships, subs, squadrons and weapons along with a concise description. Everything you have included says "professional" simply by its layout and editing. The Navy might want to consider sending a copy of this issue to potential recruits! Keep up the great work!

LT Bill White,  
OIC, Duke NROTC

## Navy Pride

My name is HM1(SW) Robert A. Hicke and I'm stationed aboard USS *Mount Whitney* (LCC 20). For the record, it is now 1:18 a.m., and I just had to get out of my rack to write to you. I'm writing to share my sincere admiration for a group of people I happened to meet this past week.

During the past four years, it has been my great honor to be in charge of our command's Third Class Petty Officer Indoctrination Course. I have helped more than 80 SN, EN and AN put on their first 'crow.' One of my normal assignments on the first day of class is to charge the new selectees to write – in at least one paragraph – why they want to be a

petty officer. I always read every paper because it helps me get to know each person a little better.

I begin to read, crumbling each one and tossing it into the waste can next to my desk as I finish. You would not believe the light they brought into my evening. With each paper came a new laugh, a little sadness or a glimpse of my past. My new petty officers were searching for a better life for their families, more trust from their superiors, more demanding jobs, more respect – in short everything I have worked for.

After about six or seven I began to reach into the trash to dig them out and straighten out the wrinkles. I began wondering to myself how many of us literally look at something, and instead of taking it to heart and reflecting on it, just crumple it and toss it aside. It would be a shame to waste any of the enthusiasm for the Navy these new petty officer's bring with them and it is our duty as senior leaders to not crumble it, but to nurture it and help it grow.

The new third classes of today will be the first classes and chiefs of tomorrow and it is up to us to make sure our Navy is the finest it can be for our future. It's 1:47 a.m. now, and when duty calls again today, reveille will sound at 6 a.m. I am only glad I stopped to read those short papers because I once again realized what makes it all worthwhile.

HM1(SW) Robert Hicke  
USS *Mount Whitney* (LCC 20)

**Tell us something we don't know.**

Send your comments to:  
**All Hands, Naval Media Center**  
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or e-mail: [allhands@mediacen.navy.mil](mailto:allhands@mediacen.navy.mil)





## Countdown to the Millennium

DAYS

275

HOURS

16

MINUTES

29

SECONDS

59

### Y2K and You

**Q: I heard lots of conflicting advice on how I should handle my personal finances to be well prepared for Jan. 1, 2000. What should I do?**

A: The best advice is don't do anything rash with your finances. Most banks are in good shape, since things like loan calculations and the like have required Year 2000 compliancy for years. So keep your money in the bank and don't cash in your investments. Beware of the scam artists who prey on fears. Their interest is in getting your money, not your well being.

If an offer sounds too good to be true, or like it is designed to scare you into doing something rash, it probably is. That's what you want to keep in mind, you don't want to be ripped off by scam artists making wild, unsubstantiated claims about how best to second guess the turn of the century. As with any sound financial plan, you should have good paper records of your accounts and bank statements. Having these allows you to quickly resolve any administrative errors that might occur at any time, not just in the event of a Y2K-caused administrative error. If you have specific questions concerning your investments and accounts, contact your financial institutions directly and ask them about their Y2K compliancy.

**Q: How can I find out if my home PC is ready for the change from 1999 to 2000?**

A: The first step in the process is to find out if your computer is compliant. Go to the manufacturer's World Wide Web site. On these sites, you will most likely find a Year 2000 compliance section or chart. There you will either be told that your system is

compliant or be given instructions on what to do to make it so. If you have an older system, or the manufacturer is out of business, the solution may be a hardware upgrade. If a website is not available, then you will need to contact the manufacturer directly. You can also link to numerous Y2K sites to get more information on tools and remediation procedures. Be aware that many manufacturers and Y2K sites are also offering freeware to help resolve Y2K difficulties, so check out all your options BEFORE you are tempted to purchase Y2K remediation tools.

**Q: Will Y2K affect the commissary?**

A: According to Defense Commissary Agency (DeCA) Director Richard E. Beale Jr., Y2K compliance has become a top priority. DeCA is working hard to ensure that all computer, computer chips and "noncomputer" systems with embedded microprocessors are fully Y2K compliant. John McGowan, DeCA executive director for operations, said, "Our agency sinks or swims on how well we serve our commissary shoppers. We cannot subject them to major inconveniences associated with Y2K. I am confident that DeCA is doing everything within its power to minimize the impact of the Year 2000 on our customers."

**Do you have a Y2K question you would like us to answer?** Just go ahead and send it to us. We'll select a few questions every month and seek out the experts for answers. You can mail your questions to:

**All Hands**, Naval Media Center  
(ATTN: Y2K and You),  
2713 Mitscher Rd., S.W.  
Washington, D.C. 20373-5819.

Or you can send us an e-mail at [allhands@mediacen.navy.mil](mailto:allhands@mediacen.navy.mil). Be sure to include your name, rate and duty station and don't forget to put the words "Y2K and You" in the subject line.

### Y2K Won't Stop Your Pay

The Year 2000 computer problem won't affect DOD's ability to pay service members, and troops don't need to do anything special to protect their personnel or medical records, Deputy Defense Secretary John J. Hamre said recently.

The Year 2000 problem, nicknamed "Y2K" and the "millennium bug," refers to the computer industry's past practice of using the last two digits of years rather than all four - 1999 would be written "99." Old hardware and software are widely used and no one really knows what they'll do on Jan. 1, 2000 - they might treat "00" as "1900."

Hamre said all DOD pay systems are already Y2K-compliant, and DOD will continue to test the systems this month to ensure they work.

"It's more complicated than just, 'Will our computers properly calculate pay?'" Hamre said. "We have to get electrons over to the Treasury Department. The Treasury Department has to pass on those electrons to the banks. The banks have to spread it out all over."

Hamre said DOD is working with all concerned to make sure pay will continue to flow. He also said personnel and medical computer systems are also Y2K-compliant.

Hamre concluded that DOD will be able to defend the United States and its vital interests in 2000, despite the millennium bug. He stood by his characterization from last October that DOD's Y2K problem will be more of a "nuisance" than a crisis.

*Story by Jim Garamone,  
American Forces Press Service.*



# Around the Fleet

## Donning Dolphins

After six weeks of classroom training, submarine school graduates will cross the brow of their first command — a 560-foot, 18,700-ton *Trident* submarine built for keeping the peace.

One of the challenges they face is getting submarine qualified by demonstrating their knowledge of the submarine, watch stations and workstations. A set of seven interactive CD-ROM disks, called the Interactive Courseware Training System (ICWTS), help overcome that obstacle.

"ICWTS provides basic qualification knowledge for Sailors entering the *Trident* submarine fleet," said Fire Control Technician 1st Class (SS) Jay Griffin, an instructor at the *Trident* Training Facility's Learning Resource Center, Submarine Base Bangor.

Using interactive text, sound and graphics, the ICWTS soft-

ware tests a submariner's knowledge of various submarine systems. After going through the entire program, students must pass a final exam with a minimum score of 70 percent. Students who don't pass the final must do the program over again.

Submariners have one year to earn their submarine warfare pin (or "dolphins") after reporting to a boat. Sailors must know the submarine, their workstation and watchstations, which requires demonstrating proficiency and obtaining signatures on their ship's qualification cards.

Griffin said ICWTS is much more efficient than books. "There are lots of visual references, so it cuts down on publication use. After seeing the shipboard system on ICWTS, they can go to the supervisor of that system and physically look at it, get an explanation and get their signature."



Photo by Dale Barber

USS *Alabama* (SSBN 731) Sailor ET2 Ben Nadolny uses the ship's study room to work on the ICWTS program. Sailors use the program to help them get submarine warfare qualified.

Another advantage for the newly-reported junior personnel is time. "In their environment, it's hard for the guys to get out of their work spaces and get signatures," said Griffin. "It took two patrols for them to get qualified. Now many of the Sailors get qualified by the middle of their first patrol."

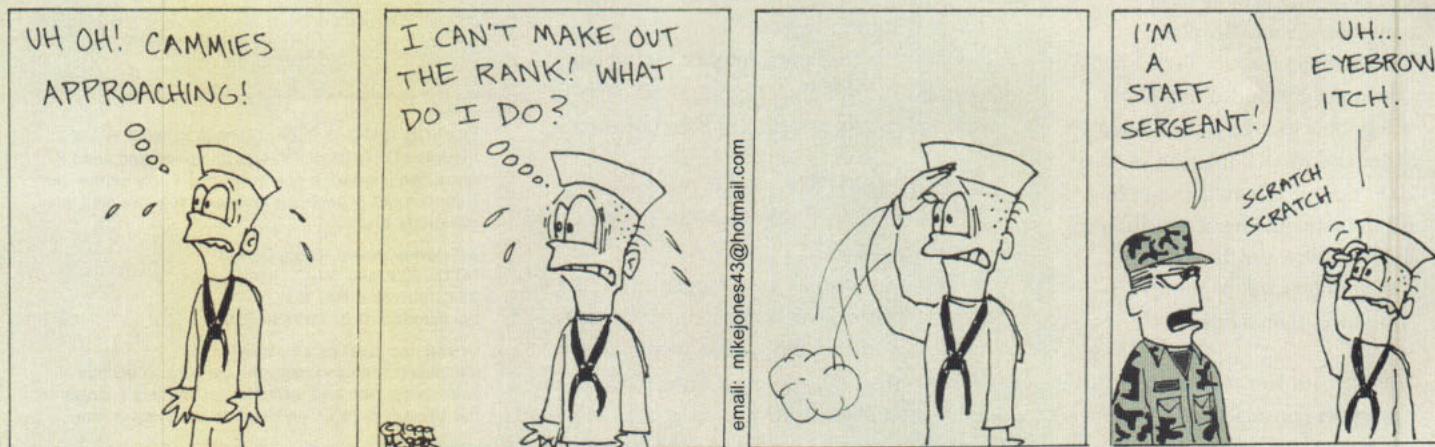
The Learning Resource

Center isn't the only place Sailors can use ICWTS. It's also available on all of Bangor's eight *Trident* submarines, and in the Off Crew Administration Building. The program is also being utilized at King's Bay, Ga., and on fast attack submarines.

Story by JO3 Anthony Silas, Submarine Group 9 public affairs office.

## Ricky's Tour

By JO3 Mike C. Jones



email: mikejones43@hotmail.com



## First Two Navy Submarines Become Y2K Compliant

USS *Olympia* (SSN 717) and USS *Santa Fe* (SSN 763) demonstrated Year 2000 (Y2K) compliance during recent pier-side verification testing. These are the first two U.S. submarines to be fully tested for Y2K compliance.

Seven more submarines (four fast attacks SSNs and three *Trident* ballistic missile SSBNs) are scheduled for similar pier-side Y2K testing. The complete systems testing will help ensure Y2K compliance for all U.S. Navy submarines.

The Submarine Directorate (SEA 92) at Naval Sea Systems Command teamed with Naval Undersea Warfare Center (NUWC) Division Newport, the Fleet Technical Support Center Pacific (FTCSPAC) and submarine crew members to coordinate and conduct the testing. Y2K vulnerable systems were tested in a full operational

configuration during a simulated at-sea Y2K environment.

All shipboard clocks were advanced to five critical dates ranging from Sept. 9, 1999, through Oct. 10, 2000. Tests were conducted at one hour before and one hour after midnight on each date to ensure proper operations throughout the midnight rollover. Shipboard exercises were conducted in accordance with an extensive and approved test plan.

Of the 26 systems tested, only one system (which detects electronic emissions from other ships) experienced a minor Y2K-related problem. A temporary procedure that will permit the operation of this system during the rollover was successfully demonstrated. A more permanent solution is being developed.

*Story by CDR Dave Veatch, director for Submarine Combat Systems Engineering, Team Submarine (SEA 92C) public affairs office.*

## SECNAV Inaugurates LIFELines Quality-of-Life Support Service

Secretary of the Navy Richard Danzig and Assistant Secretary of the Navy for Manpower and Reserve Affairs Carolyn Becraft recently inaugurated LIFELines, a new joint military services partnership for quality-of-life support services delivery system being developed for DOD personnel and other qualified beneficiaries; but most of the information and programs on the new system will be available to the general public as well. LIFELines leverages the power of partnerships and four telecommunication technologies – the Internet, teleconferencing, satellite broadcasting and cable television.

LIFELines provides quality-of-life information, support services and access around the clock and around the world via two major information channels: the LIFELines Internet Component (called the "QOL Mall") and the LIFELines Broadcast Component (called the "QOL Broadcast Network").

Those interested in more detail should call CAPT Tracy Connors (connors.tracy@hq.navy.mil) at DSN 288-4069 or (202) 433-4069 or Dick Thompson at DSN 288-4067 or (202) 433-4067.

APRIL 1999

By Master Chief Petty Officer of the Navy MMCM(SS/SW/AW) Jim Herdt

## Speaking with Sailors

**RP2 Newton, Marine Forces Pacific, Kaneohe Bay**

**How will dual military couples be considered for co-location under the JASS system?**

For co-location assignments, dual military couples do not utilize the JASS system. As in the past, both service members must submit a 1306/7 in accordance with the Enlisted Transfer Manual to request co-location assignments.

**Personnel Support Activity Detachment, Naval Station Pearl Harbor**

**Do you feel that making the warfare pin a requirement for advancement will make the pin itself insignificant?**

I often hear this question, and my answer is a definite "No." The air warfare and surface warfare programs had become what I call "me programs" — "look at me, I put out this extra effort to qualify." What this recent shift in the warfare qualification program means is that we have put in place the tools to build stronger esprit de corps within those war fighting communities.

We wanted to capture what the submariners had found a long time ago in regard to the earning of their 'dolphins.' We wanted to develop the warrior ethos, and warrior ethos says to me as a former engineer, that I am every bit as much a warrior as the Marine who is on the ground. I may be in the propulsion spaces of a submarine or a ship, but I am still a warrior. I am a warrior even if I am baking bread in the galley or a gunner's mate firing a 20mm machine gun. It is not just the officer community that comprises the warriors of the Navy.

Every person, on board every platform, must think of himself or herself as a warrior. That is the challenge that we have to take on. There is now a built-in expectation that if you are going to be career Sailor in one of these communities then you must be 'warfare' qualified if you are attached to a platform that has a warfare qualification program. The "me" part becomes operative only when you can pin your warfare device on your chest and say, "I am proud to be a part of this community with these special war-fighting skills."

**Speaking with Sailors is a monthly column initiated by the Master Chief Petty Officer of the Navy as a way of reaching out to the men and women of the fleet, whether they are stationed just down the road or halfway around the world.**

Photo by JO1 Robert Benson





# Around the Fleet

## CPOs Get Soft Shoulder Boards

**S**oft shoulder boards and metal devices have been approved for wear on chief petty officer (CPO) uniforms by the Chief of Naval Operations.

The CPO shoulder boards will be available in June. Effective immediately, CPOs may optionally wear garrison cap devices (approximate size: 1-1/4 inch) on blue windbreakers, khaki windbreakers, black dress jackets and all-weather coats until Oct. 1, 2000, at which time devices will become mandatory for CPOs. The insignia is not authorized for wear on reefers and overcoats.

Correct wear of devices on outer garments: place garrison cap device on each epaulet

centered from side to side with the bottom edge of the device approximately 3/4 inch from the squared end of the epaulets.

Soft shoulder boards may be worn optionally on the service dress blue white shirt and black v-neck sweater until Oct. 1, 2000, at which time they become mandatory. CPO soft shoulder boards should be available in June at all Navy Uniform Shops or by calling Navy/Marine Corps Uniform Support Center (1-800-368-4088). During the transition period, if a male CPO wears the service dress blue white shirt with epaulets, soft shoulder boards are required.

*Story by Navy Office of Information.*

## TORPEX '98

**H**ow well will our weapons work when it comes time to employ them? This is a question that haunts warfare commanders during peacetime, because it's central to the more basic question of whether we are ready to engage the enemy in the come-as-you-are, regional conflict environment of today.

This question is especially important for the submarine force while negotiating the sea-change from training for blue-water warfare against fast nuclear-powered Soviet submarines to littoral warfare against quiet and slow-moving diesel submarines.

The three-day East Sea Torpedo Exercise (ESTE) in the waters off the Republic of Korea,



Photo by JCS Darrell Ames

successfully proved that the MK-48 Advanced Capability (ADCAP) torpedo works in the harsh environment and high-contact density of the Korean East Sea. The idea for the exercise came as Commander,

## Museum Dedicated to Spirit of Submariners

By J02 Brigitte Barnes



Photo by PH2 Allen Warner

MTSA Joshua Hardin, MTSA John Jacobs, YNSA Dave Sharlow, ETSA Jason Witte, SR Matthew Bertels and MM1(SS) Tim Martin study the display case "Submarines at War."

**B**eing a submariner takes a special type of person. To be able to stay underwater and live and work that way for months at a time can be extremely challenging. And that's in today's Navy. Imagine what it was like for the first submariners. They ventured into the unknown depths and many didn't return. It's now possible to see what it was like.

The Historic Ship *Nautilus* (SSN 571) Submarine Force Museum, located at Naval Submarine Base New London, Groton, Conn., is the

official repository for the records and history of the U.S. submarine force, from its beginnings at the turn of the century to the modern Navy. Inside this 14,000 square foot facility are working periscopes, an authentic submarine control room and extensive models depicting the development of the U.S. submarine force.

There are two mini-theaters featuring five-minute films on the history of the Submarine Force and USS *Nautilus*.

The Navy's first nuclear submarine, *Nautilus*, now decommissioned, is opened as a museum as well. Once on board, you are able to walk through selected spaces. The museum should take about one hour to visit and the *Nautilus* visit about 30 minutes.

The museum is open May 15 to October 31 Wednesday through Monday from 9 a.m. until 5 p.m. and Tuesdays from 1 p.m. to 5 p.m. During the winter months — November 1 to May 14, the museum is open Wednesday through Monday, from 9 a.m. to 4 p.m. and is closed on Tuesdays. During the peak tourist season, the line to see *Nautilus* closes at 3:30 p.m. People in line by 3:30 p.m. will be able to visit *Nautilus* before it closes at 5 p.m.

Admission to the museum is free. For more information about the museum, call (800) 343-0079. If your group is interested in scheduling a group visit, call (860) 694-3558.





Sailors aboard USS *Frank Cable* (AS 40) prepare a torpedo for the East Sea Torpedo Exercise.

Submarine Group 7 personnel were trying to obtain accurate on-site performance projections for ADCAP torpedoes in support of the Korean Peninsula Defense Plan. They started looking at the feasibility and value of conducting an open ocean torpedo exercise (TORPEX) in Korean waters.

The exercise depended on the weather conditions in that area, where the fleets of fishing boats operating out of Pohang and Pusan would be and locating the fishing nets and buoy lines that could also be a potential nuisance.

In addition to granting permission to conduct the test, South Korean Navy officials agreed to provide patrol craft to assist with keeping the area clear of fishing boats. Helicopters would assist with torpedo spotting. USS *Key West* (SSN 722), chosen to launch the torpedoes, departed Pearl Harbor with eight exercise weapons with the hope that, during the three days allotted

for the test, conditions would be right for at least four to be fired.

*Key West* got underway from Chinhae, Republic of Korea, bound for a small area near the mouth of Pohang harbor. The attack submarine USS *Columbia* (SSN 771) followed to act as the target for the firings, preparing to operate in a tiny box (5 nm by 4 nm) at a depth of 50 to 100 fathoms. The submarine tender USS *Frank Cable* (AS 40), with divers from Explosive Ordnance Team 5 from Guam and torpedo recovery experts from Naval Undersea Warfare Center, Newport, R.I., would be the torpedo recovery platform.

The winds were calm the morning of the exercise and the Officer in Tactical Command, CAPT Tom Kyle, COMSUBPAC Submarine Group 7 ordered the first run to start. ESTE was underway. During the next three days, *Key West* fired her eight weapons, all of which were recovered safely and efficiently by the Sailors aboard *Frank Cable*.

Six of the shots were immediately declared hits by NUWC analysts on board *Key West* and *Columbia*. The last two, fired against new noisemakers to test their effectiveness in that environment, are still being evaluated. A combination of painstaking planning, superb performance of the participating units and a little luck with the weather contributed to the overall success of the exercise. The results prove that we have a weapon that works.

Story by JOCS Darrell D. Ames, Commander, Submarine Pacific public affairs office.

## TIME CAPSULE

The theme of the September 1967 issue of *All Hands* was "The Silent Fleet." Several articles inside the 65-page magazine highlight the saga of the submarine service:

**Origin of the Undersea Navy:** Official history of the submarine service dates back to the commissioning of the Navy's first submarine USS *Holland* (SS 1). Unofficial history, however, dates back much further. Egyptian hieroglyphics, uncovered in the Nile Valley, illustrate how early duck hunters used to creep up on their prey from beneath the surface, breathing through hollow papyrus reeds.

**Fish Out of Water:** The lead photograph in this article depicts dungaree-clad Sailors loading a large Navy SubRoc (short for Submarine-Launched Rocket), the undersea fleet's newest half missile, half torpedo. At the time, SubRoc was the standard weapon : nuclear attack submarines.

**Why They Wear Dolphins:** "Few people who join the Navy elect to take on the rigors of living and working in the confines of a submarine. Space is limited, fresh water is scarce and the hours underway are long. But each year thousands of Sailors eagerly volunteer for submarine duty. They do it to become a member of the undersea club — an organization endowed with prestige and esprit de corps."

**Sentinels of the Free Seas:** The *Polaris* fleet ballistic missile (FBM) weapon system was first deployed aboard USS *George Washington* (SSBN 598) in 1960. Seven years later at the time this issue was published, 40 other nuclear powered submarines had been commissioned. The three classes of submarines deploying *Polaris* technology were USS *George Washington*, USS *Ethan Allen* (SSBN 608) and USS *Lafayette* (SSBN 616). The FBM system under development for future submarines, called *Poseidon*, boasts a bigger size and will carry twice the payload of the *Polaris* A-3.





# HAZE

When you're the Secretary of the Navy and have a few hundred thousand people working for you, certain things take on greater importance, like a ringing mobile phone.

Who knows? It could be the President or the Secretary of Defense with high level information on global events.

So Richard Danzig answers the call as he does just about every morning from the back seat of his mobile office: an unmarked Lincoln Continental.

In the car he has his faxes and phones, his TV and modem, his point papers and briefs...the techno gadgetry that allows our Navy's "CEO" to accomplish his mission: helping Sailors and Marines.

You have to admit, anyone who rolls up his sleeves prior to beginning a job – especially if it's a desk job – is not going into it lightly. Study this 54 year-old man sitting at his desk – a prior Under Secretary of the Navy, a holder of two doctoral degrees and two bachelor's degrees, a former Oxford University Rhodes Scholar and published author; this man clearly brings the right tools to the job.

As he sees it, one of his biggest problems is how to help Sailors and Marines, while at the same time communicating to them what he's doing. "Trying to bridge that gap, do things that are genuinely useful, and show people that things are improving is a big challenge of the job," he said.

Danzig's most pressing priority – his mission in life, so to speak – can be summed up in one sentence: He wants to improve the way Sailors and Marines fight, the environment in which they work and the way they live.

Call it his vow, creed or motto, but it's true. Shortly

after taking the SECNAV job five months ago, Danzig openly declared himself an "activist" in fighting problems within the Navy.

He's been pursuing this from day one – from the moment he raised his right hand. Quite frankly, Secretary Danzig has been making waves in the Navy, and it has been these three issues that seem to propel him. The end result, if he's successful? To retain good quality people and make the Navy Department better.

"I always put a deep premium on trying to keep our best people," he explained. "You do it in some respects by talking with them, one-on-one."

**"I always put a deep premium on trying to keep our best people, ...You do it in some respects by talking with them, one-on-one."**

"At the same time, you do it institutionally by creating the right environment," he continued. "I try to do this with my emphasis that we are not a zero-defect organization. You can make mistakes, overcome them and still rise."

Improving quality of life is one institutional function Danzig has pursued relentlessly: "One thing apparent to me even in my first few days as Secretary of the Navy was that Sailors and Marines are working too hard."

He is listening to Sailors' concerns and realizes that they need support. "We can, in a variety of ways, give them more support, better personnel systems and a better supply of equipment to let them do their jobs."

That's why he's pushing so hard to improve pay, working conditions and educational opportunities.

"I am pursuing pay incentives that were unveiled in the president's budget, and, for me, that's the big target at the moment. It really does three things. It provides a substantial pay raise, rolls back the Redux retirement program, and it changes the pay table, so some people will get pay raises as big as 9.9 percent next year."

Story and photos by JO2 Jeremy Allen



# GRAY

## AND CHANGING WAYS



Secretary and Mrs. Richard Danzig chat with a Sailor following his swearing-in ceremony, Nov. 16, 1998.



Secretary Danzig discusses the LIFELines program with CAPT Tracy Connors.





Secretary Danzig labors daily to improve the lives and working conditions of Sailors and Marines. The painting over his head serves as a constant reminder of how vital that job is.

Along with getting Sailors and Marines more money, the Secretary has shown a propensity to ask some pretty tough, down-in-the-dirt questions. "Why do people graduate from boot camp and spend weeks waiting to go to 'A' school?" asked Danzig with frustration. "Why do people go to 'A' school and wind up being assigned to work that isn't related to their 'A' school specialization when they get out to the fleet?"

The answer, according to Danzig, is to "treat people as very valuable professionals. Don't waste their time or ask them to do their jobs without adequate equipment. That's what "Smart Work" is all about. I'm asking questions like that and I am pushing for those kind of changes."

With his new retention and recruitment initiatives, Danzig is very optimistic about making a difference. He said he thinks the results of these changes will show up in the flow of more – and more capable – recruits to the fleet this year.

With all eyes seemingly upon him, Danzig remains far more focused on making progress than a name for himself.

"Former Secretaries of the Navy have almost all been forgotten,

## GETTING SOME ANSWERS

All Hands magazine had a chance to sit down with the Secretary of the Navy and ask some

**Q:** Why did you want to serve as SECNAV?

**A:** *"Having worked as Undersecretary, I knew a fair amount about the issues and had a number of relationships with people who I felt would be very helpful to me and whom I could help. This made for a special opportunity. I think I can do some good."*

**Q:** Recently a special commission of former military personnel recommended to Congress that anyone enlisting for four years would also have four years of college paid for, plus a \$400 a month stipend. How do you feel about this proposal and would you support it?

**A:** *"I very much support ideas that would provide more educational benefits to Sailors and Marines. As to the particulars to this proposal, I haven't studied them yet. The real question is how would the costs be financed and from what kind of sources? I think as a general notion the idea is good, but can we pay for it?"*

**Q:** As access to the Internet increases, how do you see the Navy responding to this new technology to reduce workload and improve ordinary functions?

**A:** *"The Internet opens up a lot of possibilities for us. For example, our Quality of Life virtual shopping mall in LIFELines is terrific. (Editor's Note: This can be found on the World Wide Web at [www.lifelines4qol.org](http://www.lifelines4qol.org)). It gives service members and their families direct Internet access to a lot of the offices in the Navy that provide information on housing, deployments, educational opportunities and benefits. Things like distance education and telemedicine open opportunities for us in shipboard training and improving the quality of life onboard ship. E-mail is probably the most important morale benefit in recent years. Those are all indicative of how the Internet improves our circumstances."*

**Q:** Anything on the horizon to minimize or combine workloads via the Internet?

**A:** *"We are rethinking our school arrangements because of the possibilities of continuing learning while on the job. PACE and the possibility of connecting online now provides endless college education possibilities as well, and they're terrific."*

**Q:** What would you say to any Sailor who is offered what looks like a better "deal" in the civilian sector but can't decide on staying in or getting out?

**A:** *"I'd say three things. First, the Navy is an exceptionally rewarding profession - more rewarding in terms of the meaningfulness of the work and the richness of the experience than virtually any civilian job. Second, there are relationships with your fellow workers in the Navy and Marine Corps that aren't going to be duplicated in the civilian world and are worth more than any amount of money. Third, the financial support and our support for the working environment is rapidly improving, and so long as I have anything to do with it, it will continue to improve, in the Navy and Marine Corps."*



as they should be," he said. "They're part of a larger organization. It just isn't that important what they did individually.

"What matters, I think, is whether we make this a better organization right here and now, better for the people within it and better able to serve America and her interests."

Danzig said he will no doubt be forgotten, too.

Given his track record thus far, however, that's pretty hard to imagine.

Ironically, the people featured in the painting on the wall behind Danzig's desk may have felt the same way — that they too would be forgotten.

The canvas depicts a Navy corpsman and a few Marines erecting a symbol that stood for freedom and courage: the American flag atop Mount Suribachi.

Spend a day with Secretary Danzig, and you get the feeling that that painting is there for a reason. He may truly believe he'll be forgotten, but there's no way he's going to let himself forget what's most important — the lives and efforts of Sailors and Marines.



There is always time in the Danzig family for some good food and fun. With Andrea working full time as a psychotherapist, they both cherish their time together and make the most of it.

Allen is a photojournalist assigned to All Hands.

## Frank questions. Here's what he had to say:

**Q:** Admittedly, there are some problems with TRICARE — especially waiting lines and appointments. Do you have plans to revise the system?

**A:** *"I think there are a number of problems with TRICARE, but a lot of them relate to the transition to the new TRICARE system. My sense is that, with time, these problems are likely to diminish. Time isn't some abstract thing, people are living through it right now, so I've placed the emphasis on coming to grips with improving the transition to TRICARE and making it as smooth as possible. I'm not out campaigning against TRICARE, I'm trying to improve it."*

**Q:** In a recent letter to Sailors and Marines, you expressed a desire to improve things like paint and water tight doors, and it seems that some people in the military are too comfortable with doing things the "old fashioned way." How are you going to address this?

**A:** *"I think people are responsive when a Secretary of the Navy says, 'I really care about this. This is a problem. This isn't a good way to do things.' We've put several hundred million dollars in the budget for what I call 'Smart Work' initiatives. I think the bureaucracy will follow through. It's not as though people want things to be bad for Sailors, they simply undervalue the importance of these particular items."*

**Q:** How many ships would you like to see in the Navy's fleet and why?

**A:** *"As many as we can get. The reason for that is because the more ships we have, the more effectively the Navy can convey its presence around the world in ways that have a great advantage for America."*

**Q:** Some recent studies have indicated there is no pay gap with the civilian world. How significant is the gap and what is your first course of action in reducing it?

**A:** *"There are a lot of arguments about how to measure this relationship between military pay and civilian pay. Some measures show no pay gap, others show our enlisted people are paid more than their contemporaries in civilian life, and still others show that they're paid less."*

*What I tend to care about is what military personnel are saying and doing. How are they living? They're entitled to live well. They're entitled to live in a circumstance where they're able to focus on their very demanding work. They are entitled to be rewarded for the risk they run."*

*I ask what they're doing. If they're leaving the service and we're having trouble recruiting, then obviously we're not paying enough. What am I doing about it? I mentioned the three things that I'm supporting: the pay raise, the roll-back of Redux and the change in the pay table. I am very hopeful that we will get these passed by Congress this year."*

**Q:** Are there areas in which the Navy and Marine Corps team can or should be strengthened?

**A:** *"I'd like to increase the closeness and familiarity between Marines and Sailors, particularly at the higher levels. In the field the relationships are often very positive. We have potential for more synergy in Washington, D.C. in the way we manage our budgets and our policies and our organizations. I was a big proponent of bringing the Commandant of the Marine Corps into the Pentagon, so his office would be next to the CNO's. It's important to bring organizations closer together on the Marine Corps side and Navy side so they get more involved."*



A person in a dark coat stands on a snow-covered ridge, looking towards a lighthouse in the distance. The scene is set in a vast, icy, and desolate landscape under a pale sky. The overall tone is blue and purple, emphasizing the cold and isolation of the environment.

# Polar

# Pioneers

In the late 19th century, there were only a handful of unexplored frontiers left to conquer. But on April 6, 1909, after CDR Robert Peary trekked across arduous terrain in sub-zero temperatures and planted the American flag at the northernmost point of the earth, there was one fewer.

Story by JO1 Rodney J. Furry



With all points South spread out before him, Peary wrote in his journal:

90 N. Lat., North Pole,  
April 6, 1909

I have today hoisted the national ensign of the United States of America at this place, which my observations indicate to be the North Polar axis of the earth, and have formally taken possession of the entire region, and adjacent, for and in the name of the President of the United States of America.

I leave this record and United States flag in possession.

Robert E. Peary  
United States Navy

He ripped out the page and sealed it in a glass jar, leaving it as proof of his discovery and as an affirmation to those who would follow. Little did he know that those who would come after would not walk over his tracks, but rather glide gracefully under them in enormous steel boats.

It was early evening, Aug. 3, 1958, and in a world turned upside down, the torpedo-shaped hulk of USS *Nautilus* (SSN 571) slipped quietly and secretly toward the pole amid the tension of a growing Cold War. Armed with the world's first nuclear-powered engines, she was the first submarine capable of making the long voyage under the ice cap without ever surfacing. *Nautilus'* Skipper, CAPT William Anderson, was on a mission to transit from the Atlantic to the Pacific Ocean via the Arctic Ocean – a feat which carried great political and strategic importance in the changing global climate of the late 1950s.

All hands paused and listened as Anderson prepared to guide his crew into history. He announced, "The distance to the Pole is now precisely four-tenths of a mile. As we approach, let us pause in

silence dedicated with our thanks for the blessings that have been ours during this remarkable voyage – our prayers for lasting peace, and in solemn tribute to those who have preceded us, whether in victory or in defeat."

There was a lingering silence as the boat slipped quietly to a spot under the ice that to the naked eye was as indiscriminate as any other, but to the world it would seem they'd discovered the North Pole all over again.

He continued, "Stand by. Ten . . . eight . . . six . . . four . . . three . . . two . . . one. Mark! August 3rd, 1958 . . . For the United States and the United States Navy, the North Pole."

Bringing the boat to a halt under the historic spot, Anderson gave the crew an opportunity to mark the moment, and celebrate their achievement.

"We took advantage of the opportunity to qualify a few of our newer submariners, and even reenlisted one of our guys so they could say they were the 'first,'" he said.

One ecstatic junior enlisted submariner proudly announced later that as the Skipper began his countdown, he crawled as far forward as he could in one of the boat's torpedo tubes making him the very first enlisted man to cross the North Pole. While they had made history, and proven that a shorter route between the East and West could be navigated, there was but one thing left undone by the crew of USS *Nautilus* – to surface.

As a cold and bitter wind whipped across the frozen wasteland, a small complement of the crew of nuclear submarine USS *Skate* (SSN 578) looked out across the darkening landscape of the North Pole. They stood bundled in heavy Arctic clothing while their breath froze in clumps around the edges of their parka hoods. It was March 17, 1959, and they were the first people to see the landscape that Peary had discovered 50 years earlier.

*Skate's* mission was to further the research they'd begun the summer before on their first voyage under the ice barely out of the wake of USS *Nautilus*. *Skate* had been blessed with a bounty of electronic equipment designed solely for the purpose of detecting polynyas, or small lakes that thaw in the ice cap during the summertime. This gave them the ability to seek out the polynyas, surface at various points and conduct scientific observations of the conditions of the ice and weather in the region.

"We were all pretty confident in each other," CDR James Calvert recounted. "The men and officers were relaxed and at ease with the equipment. Of course, we wouldn't have ever gone if we didn't know it would work properly," he said.

The importance of their mission, and that of *Nautilus* the year before, placed a historic responsibility on their shoulders. While they successfully gathered valuable scientific data in a scarcely charted region, they also proved the peaceful value of nuclear power in an increasingly unstable political world, and opened up the undersea frontier of the Arctic as a new sea lane.

As Peary lay recovering from the amputation of several frostbitten toes following one of his failed attempts to reach the North Pole by sled, he found the energy to scrawl a few words in his journal. He wrote in Latin, "Inveniam viam aut faciam" – "I shall find a way, or make one." These bold words seem to have set the tone for all of the Navy's northward intentions, and in a more chilling way convey the infectious tenacity that submariners have always possessed.

"Where there was no way, we've made one, and all who follow do so in our shadows."

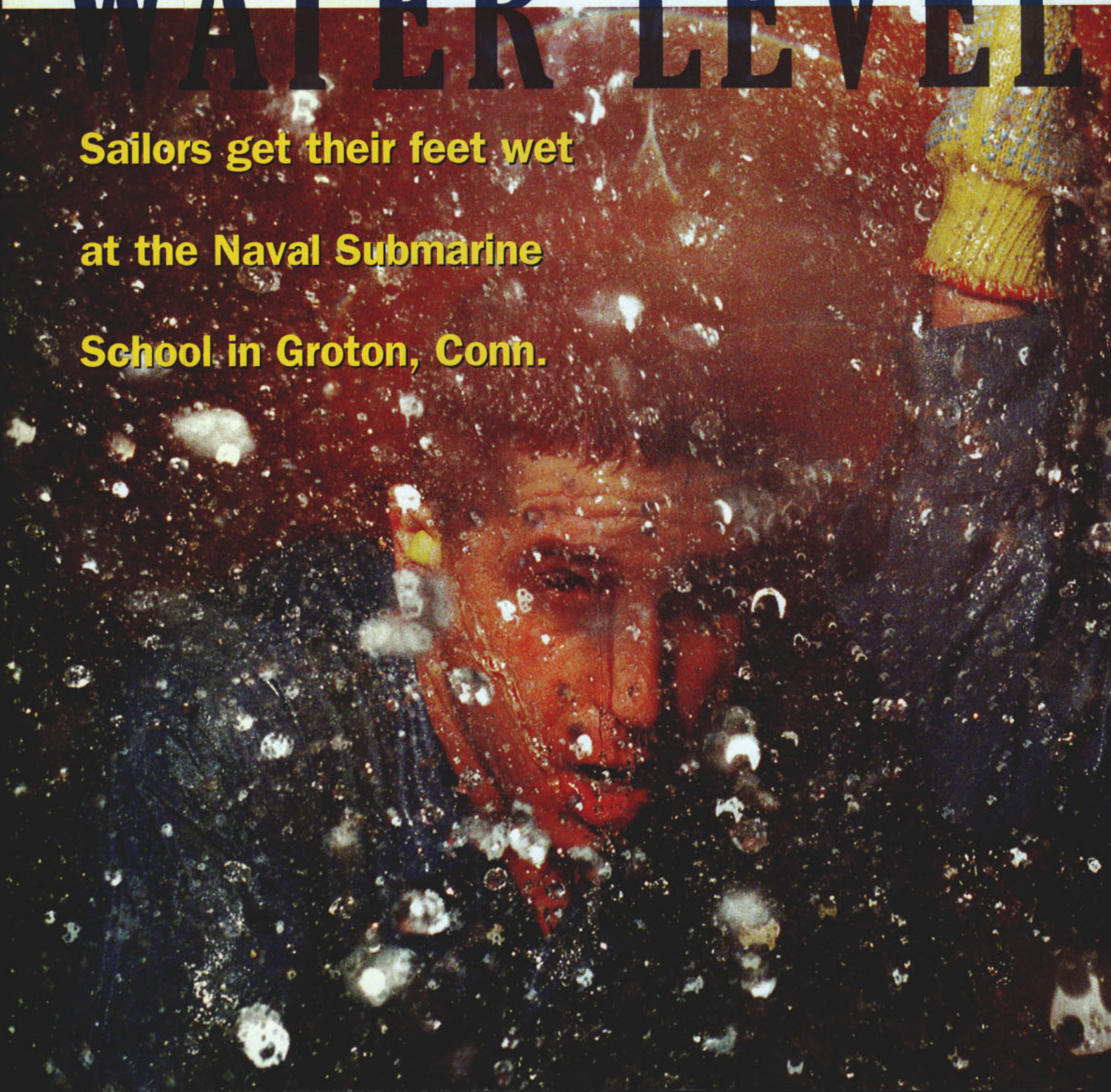
*Furry is a San Diego based photojournalist assigned to All Hands.*



Story and photos by JO1 Robert Benson

# WATER LEVEL

**Sailors get their feet wet  
at the Naval Submarine  
School in Groton, Conn.**





# RISING

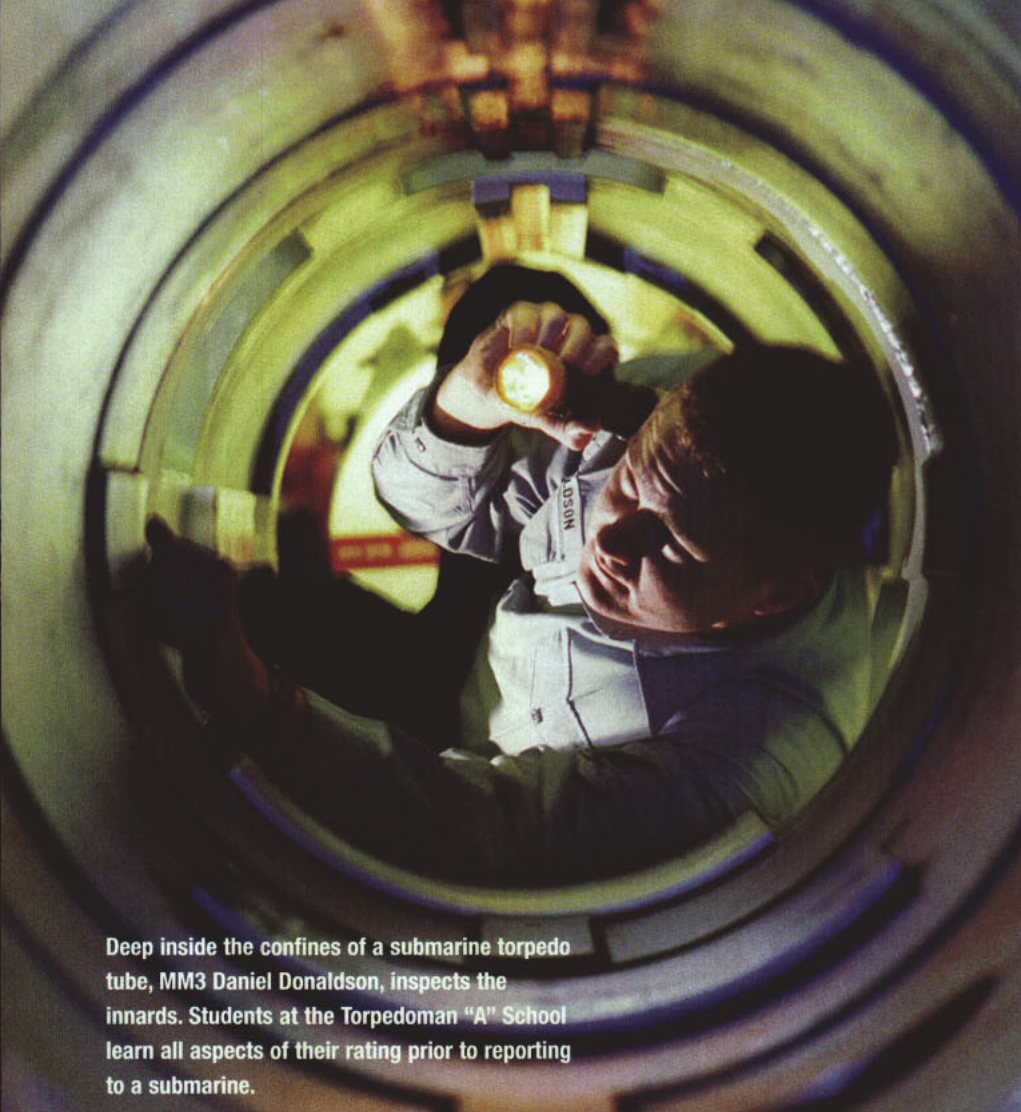


Twelve hundred gallons of water per minute spray from a ruptured pipe, and SA Joshua Adams (left) and SA Allen Smith are doing their best to contain the leak. The wet trainer at the Naval Enlisted Submarine School is a mock up of a submarine engine room and is used to train Sailors how to repair leaks during an emergency.

**Look deep** in their eyes – all 12 wringing wet, shivering young Sailors – and you’ll see anxiety, frustration and maybe a little fear as the water level quickly rises from their ankles to their knees to their waists and higher. A pipe has been ruptured, and cold water is filling the small room faster than a fire hose could fill a plastic kiddie pool. If this was happening hundreds of feet below the surface, their lives would be on the line. Here, in the submarine wet trainer at Naval Submarine School, Groton, Conn., they can just shut it off. But that doesn’t make it any less real. This submarine may be simulated, but it is sinking – and the only way out is to patch that pipe.

In contrast to the deafening noise created inside the room by yelling students, high water pressure and rupturing pipes, it’s quiet and calm in the control room, where Machinist’s Mate 1st Class (SS) Kenneth M. Shreve is overseeing the safety of the “disaster.” “You’re not supposed to do that,” he whispers to no one in particular, watching a young 18-year-old submariner submerge himself to fix an underwater leak. On his signal a button is pushed, and two more pipes spring a leak. With the water level chest high for some inside, Shreve sounds a blaring horn inside the room, signaling that things aren’t going right.





Deep inside the confines of a submarine torpedo tube, MM3 Daniel Donaldson, inspects the innards. Students at the Torpedoman "A" School learn all aspects of their rating prior to reporting to a submarine.

The flooding trainer is one of many pieces of equipment at the Groton submarine school that simulate submarine systems or provide computerized training in the operation of a boat.

There's other buildings – 15 of them – that hold other trainers like the *Seawolf* submarine control room, where Sailors can simulate diving, driving and otherwise controlling the boat, or the torpedo room and the missile launch control room, where in a general quarters emergency-like environment, Sailors learn how to take out the enemy. There's even a mock engine room that catches on fire, leaving Sailors to fend for themselves with a battery of fire killing equipment. All, of course, under the watchful eyes of safety observers and instructors.

"SUBSCOL," as the Sailors call it, is a prerequisite for any Sailor headed to a submarine. At this state-of-the-art school, submariners are exposed to a five-week

initiation where they learn about submarine tactics, navigation, administration, communications, weapons, maintenance – just about everything they need to know before going to a sub. Most of the training is done through hands-on work in simulators, where students can make a mistake without putting 130 lives at risk.

In addition to teaching officers and enlisted submariners that basic knowledge, the school also provides functional refresher, advanced and team training to submarine and submarine support personnel to increase and maintain knowledge and proficiency in specific skills. The teaching staff of more than 500 also furnishes specific operationally oriented support to submarines to ensure maximum effectiveness of their sensor systems.

A final mission of the school is to perform other unique submarine-related training that may be required (Through



continuous communications with the fleet, school officials can determine when a new course is needed. They recently started an obscure course on maintaining submarine hatches.) More than 230 courses are taught at the school, and every year, 44,000 Sailors graduate.

Sounds like info you might read in a welcome aboard package, right? Or the kind of facts and figures that make your eyes glaze over, right?

In fact, there's probably a picture in your mind of this school: Musty old Navy classrooms from the 40s, wooden desks, chalkboards, long lectures from crusty master chiefs, an occasional overhead transparency... Is that what you're seeing? If so, your vision is wrong – way wrong. This school bristles with cutting-edge technology – a billion dollars worth of it: laser disk computers, interactive multi-sensor analysis training programs, a 21/H-27 interactive courseware system, flat panels, touch-screens, joysticks, sophisticated plasma displays...

Sounds like future technology, but it's all real, and it's all at the SUBSCOL. The school is so advanced that many courses don't even use paper: no notebooks, no printed tech manuals, no paper instruction guides – no paper of any kind. Just computers. And a bunch of wide-eyed, young Sailors.





Nervousness and excitement are two of the most common feelings students experience prior to going into the fire trainer to fight live fires.

"The students love the technology," admits Sonar Technician 2nd Class (SS) Michael Bethany who teaches using an interactive multi sensor analysis program, a sort of computer-generated teaching aid. "If a student doesn't understand something, we can go back in the computer, display what they don't understand on the big screen, and run through it again," said Bethany. "They don't have to visualize problems; we show it to them. Once they understand something they previously didn't, you can see a light bulb go on."

For a learning environment this modern and high tech, the word "school" almost sounds restrictive or dated. Should they call this Groton gem a school? Perhaps "institution" is a better word choice. No, too formal sounding. University? Although the place is accredited by the New England Association of Schools and Colleges, university sounds too civilian. How about lyceum? No. Too abstract.

Perhaps "SUBSCOL," the old Sailor standby, is best. The Sailors are, after all, the ones who run the place. All the courses are taught by Sailors – Sailors who have been through the school in the past, gained experience through numerous deployments, then have

returned to the school to pass on that education to younger Sailors.

Indeed, today's SUBSCOL is a far cry from the more rustic operation that was in place when the school opened its doors for the first time in the summer of 1916. Back then, 24 officers began six months of studies in a single building on the lower part of the base to prepare themselves for submarines. By Christmas of the same year, the grads of the first submarine officers course were heading out for assignments after learning about submarines, torpedoes, engineering and electricity. Within a year, those officers, along with others who followed, were serving around the globe as the United States entered World War I.



Students at the SUBSCOL learn through hands-on experience, and under the watchful eye of Instructor ET2 (SS) Thomas Spicer.

Today, 83 years later, that center for submarine training excellence remains at Groton, the city which is to submarines, what Pensacola is to naval aviation.

Here's a look at some of the main training facilities the school boasts:

### **Seawolf Ship Control Operations Trainer (SCOT)**

Even before the Navy delivered USS *Seawolf* to the fleet, SUBSCOL had the guts of one of them in its training center. There's half a dozen trainers devoted to *Seawolf*, many with multi-functional, flat-panel displays, touch screens and joysticks – words more commonly associated with a deep appreciation for computers. But the young 18-and 19-year-old Sailors – the generation that grew up with video games and lap top

computers – have taken to the multi-million dollar *Seawolf* trainers with a passion.

"Our controller is a cross between the space shuttle and the Batmobile," said Electronics Technician 2nd Class John Havill, a *Seawolf* instructor. "The students love this thing and have really taken to it. They're very comfortable with the digital displays and the computer-assisted technology."

Havill said one thing that sets the *Seawolf* trainer apart from the older trainers is that it's all enclosed. "The lighting and ventilation can be controlled. We can turn off the fans and make it hot and sweaty. Or if you go to periscope depth, we can lower the lights, just like on a real submarine."

He also pointed out that a computer room containing 23 powerful hard drives generates the sub's reaction based on control room inputs from the students.

According to Havill, no other ship control operations trainer has been delivered prior to a class of submarine. They've always been built after the boat has gone into the services.

The SUBSCOL also has SCOT trainers for several other classes of submarines, including the *Los Angeles* class.

### **Combat Systems Training**

The AN/BSY-1 Integrated Sonar and Weapons Control System is taught at the school. For combat systems, computers are at the heart of both operator and maintenance training, and figure prominently not only for novice submariners, but for the highly experienced senior petty officers as well. Basic operator training for the BSY-1 is carried out on 12 computer stations where video terminals display sonar stations, fire control stations and any type of equipment associated with the BSY-1.

"The student sees everything he will see on the boat," said STC(SS) Douglas Hovland, an instructor for the BSY-1 basic operator trainer. "Sonar techs who go through here will get everything from TMA (Target Motion Analysis) up to equipment refresher training."





In a simulated sonar room, students learn the basics of listening for things that move in the night - besides water.

### Fire Trainer

A fire on board a submarine while operating deep below the surface is not a good thing. Because of the modern equipment and weaponry in nuclear submarines and the multitude of sources for fire, it's important that sub crews remain highly trained in all aspects of fire fighting. Thanks then, to "Street Hall," home of the fire-fighting trainer that teaches the newest submariner to the most senior man on board how to use all of the Navy's fire-fighting equipment. In a simulated engine room, instructors create an actual fire, and through numerous scenarios, show the students how to combat the flames of various types of fires.

"We have about 3,500 students who come to this fire trainer per year," said MMC(SS) John Perisie, an instructor and leading chief at the facility. "Teamwork and safety are the things we stress most. We teach the basic course to the brand

new students. We also have the advanced course, which is for E-6 and above, where we go into advanced fire fighting with teams."

The trainer is even environmentally safe. The chemical foam that normally would be used against oil fires has been replaced with a soap that has all the same properties, but will do no environmental damage. A computer in the simulator senses when the right amount of the correct fire fighting material has been applied, and shuts off the fire.

"A real fire can get out of control within minutes on a sub," said Perisie. "The temperature and pressure would go up rapidly, especially on a sub."

"Every student has the opportunity to apply agent against an oil fire, a hull fire and an electrical fire," Perisie said. "By the time they get back to their ship, they've got hands-on experience in anything they might encounter."

### Flooding chamber

Like fire, flooding can also present drastic problems for a submarine crew. The damage control trainer simulates the general arrangement of the forward end of the lower level engine room of an SSBN 650-class submarine. Everything is matched to an actual sub, from the color of the bulkheads, to the stenciling on the pipes. In the compartment, students learn first hand how to apply the damage control procedures they learn in the classroom. The trainer's 12 leaks present a variety of casualties ranging from damaged saltwater piping to lube oil leaks which can flood the trainer with more than 20,000 gallons at the rate of 1,200 gallons per minute.

### Submarine Escape trainer

At Momsen Hall, named after VADM Charles Momsen, a pioneer in sub escape technology, the Submarine Escape Trainer teaches young submariners how to get



STS2 (SS) Michael Bethany (left) and STS1 (SS) Don Barnes, are two of the more than 500 instructors who make up the staff at SUBSCOL, Groton, Conn. The teaching staff trains an estimated 44,000 submariners per year.

away safely if their ship is in trouble. The hall has two escape trunks which are identical to those in a *Sturgeon*-class submarine. The building also houses a \$3.2 million hyperbaric chamber, used to treat people with diving-related injuries throughout the northeastern United States.

Students climb into the "escape hatches" from ladders below them, just as they would in a sub. Then they put on "Steinke hoods," which inflate for buoyancy and force their way through a small opening into a swimming pool. There, a life raft waits to haul them out of the water. Students quickly learn that no amount of book learning will help when they're getting into a boat that bobs and weaves in calm water.

"If you're going to be claustrophobic, it'll be identified in this trainer," said MM2(SW/DV) Kenneth Bibalo. "Our school is one of the first ones students go through. It's done that way so we can find early on who might have problems with claustrophobia."

Bibalo said on occasion they have students who panic in the small, water filled chamber, but he said, "it's not often that they can't finish the training."

In all of the trainers, safety is emphasized. Throughout the trainers are large signs reminding Sailors that they have the right to stop any exercise if they feel at risk, or if they are feeling ill. The trainers are also built to quickly eliminate conditions that might slow down a rescue; the fire simulator, for example, can be fully cleared of smoke in seconds via large ceiling fans.

"We spend a lot of money making a guy smart and they become very valuable," said Fire Technician 2nd Class (SS) Marlin Myrick. "The things they learn here are teamwork and self confidence. Whether fighting a fire or plugging a leak in a pipe, they learn that if they work together they can deal with it," said Bill Kenny, the school's public affairs officer. "Navy recruiting advertisements speak of

'Let The Journey Begin.' The goal of instructors at Submarine School is to provide talented Sailors with the tools and skills to be successful members of the 21st century's submarine force, so that the journey may begin."

But, when you check out the young Sailors at SUBSCOL driving a multi-million dollar *Seawolf*, or saving lives by putting out fires and floods, or learning wizardry in classrooms – looks like that journey has already begun.

*Benson is a photojournalist assigned to All Hands*



## The Cradle of the Submarine Community

Every town is famous for something. Milwaukee has its baseball. Honolulu has great beaches. Denver has the Super Bowl champions and Groton, for one thing, has its submarines. Its been that way in Groton for about 84 years, ever since the gunship *Ozark*, accompanied by four submarines, pulled into the small Connecticut city that was home to a small Navy coaling station.

More submarines came. More tenders came. More people came and the place began to grow.

In 1916, aided by submarine research, development and construction of submarines in Groton, the Navy department converted the facility into a submarine base.

Next, the Navy established schools and training facilities. After World War II, the submarine force was strengthened, mothballed vessels were recommissioned, new boats were built and facilities were added to the base as part of a rapid wartime expansion. Many of the submarines and crews, outfitted and trained at Groton Submarine Base, fought and won the war in the Pacific half way around the world.

Today, the base is considered the home of the submarine force and a place every submariner will most likely call home sometime in their careers. Nestled on the east side of the Thames River, the submarine base occupies more than 500 acres and has more than 400 buildings. New construction and facility improvement still continues. The base is home to more than 40 tenant activities, including the submarines and crews of Commander Submarine Group 2, Commander Submarine Squadron 2 and Commander Submarine Development Squadron 12. There is also Naval Submarine School, Naval Hospital Groton, Naval Underwater Medical Institute, Naval Submarine Medical Research Laboratory and the submarine repair and support staffs of Naval Submarine Support Facility, among others.

With mild weather year round, a New England location rich with history and a community that welcomes the submariners and their families, Groton can truly be considered the cradle of the sub community.



# Suck in your stomach, and come aboard an underwater phenomenon

Story and photos by JO1 Robert Benson

# UNDER

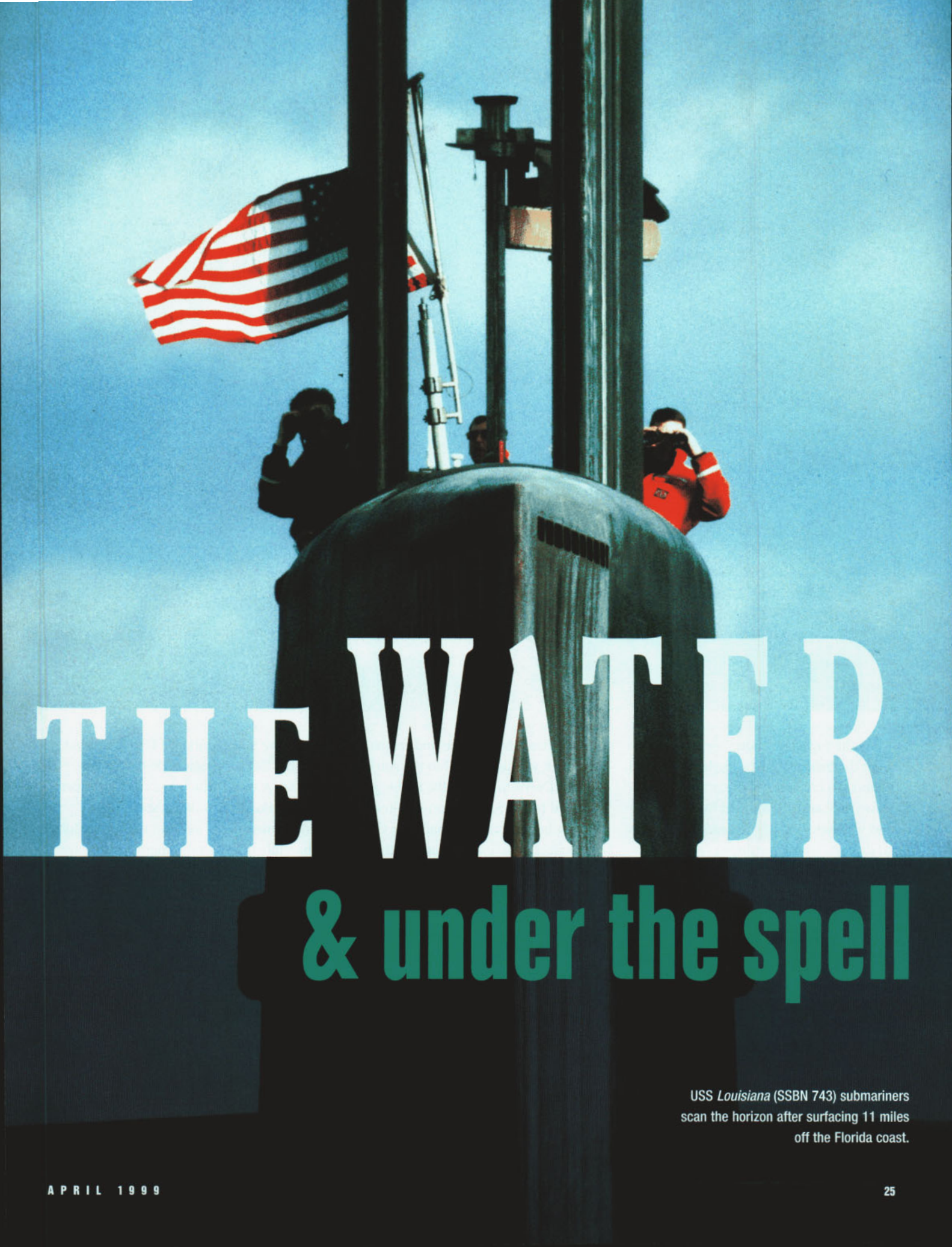
**H**urricane Mitch is wreaking havoc and Mother Nature is furious, but there's no dread in the air. Not here, not now, not on board this flat-bottomed tug.

Even though the boat is getting pummeled by pounding waves, the crewmember's minds are elsewhere. Together they dwell on what's ahead. It's been nearly three hours since they left homeport in Kings Bay, Ga., and the tiny tug has only traveled 11 miles. Soon the drone of the diesels die down, hinting that they're getting close.

Grab a hold of something and look past the crewmen. Look out the port-hole; look past the sleeting rain, the huge waves and the howling wind - and you'll see the mammoth black hulk of something that almost looks evil. Something that could send terror down the spines of the timid.

Lightning strikes and thunder claps, something looms out there - huge, fierce and awesome.





# THE WATER

## & under the spell

USS *Louisiana* (SSBN 743) submariners scan the horizon after surfacing 11 miles off the Florida coast.





Diving at a 20 degree down angle creates unusual body positions onboard USS *Louisiana*, something STS1(SS) Scott Pitre (center) is used to.

As the tug grows closer we can see what the behemoth is: a nuclear-powered, *Ohio*-class ballistic missile submarine, before one and all, unfazed by the wind and weather. One of the deadliest, stealthiest, fastest warships ever put to sea is about to be boarded by mere mortals for a three-day period – a blink of time to the crew members on board, who are used to four months or longer underwater in this jet-black deterrence machine.

As the small tug pulls alongside the sub, dwarfed and petty, it extends its gangplank, which moves back and forth, up and down, playing to the motion of the waves. One at a time, the chiefs and civilians leave the tug and run across between waves. Soon all are on the outer hull of the sub and quickly escorted to

the rear hatch by a search and rescue swimmer, who is secured to the sub by a “leash.” Down the hatch the riders go, followed by the SAR swimmer, a few other submariners and finally the Chief of the Boat, who quickly secures the hatch behind him, but not before a few gallons of saltwater from a passing wave sneak in. Drenched head to toe, the wide-eyed visitors have just entered another world. What they are witnessing now, these newcomers, is not unlike what visitors in Willie Wonka’s Chocolate Factory experienced: a strange place that defies all logic – a community that lives and works in an enclosed space underwater, where they make their own power and air, and have the guts to employ democracy anywhere in the world.

Welcome, guests, to the ride a select

few have taken, onboard USS *Louisiana* (SSBN 743), the newest SSBN in the world. A vessel which has characteristics that make it formidable: stealth, endurance, firepower and mobility. More than idle bureaucratic rhetoric, they are characteristics that ring true – and within minutes of stepping on board, these traits silently start to make themselves known.

Around the visitors, crew members in noise-defying, rubber-soled tennis shoes scurry up and down passageways; briskly making their way to other parts of the sub. Water that came inside is quietly blotted dry by towel-wielding junior submariners. They work quickly, quietly and diligently, almost like soldiers fighting an invading foe. Every drop is wiped up. Then the surfaces are wiped again. Then again and again.





During a long, six-hour watch, a submariner in the radio room finds a comfortable position.



A blur of electronic wizardry, run by sonar technicians, monitor contacts while submerged deep beneath the surface.

Then again.

These aren't overzealous crew members trying to do good. This is the norm. What seems to be overly methodical work to the landsman is a telling clue to the personality that makes up a submarine crew. The fact is, these guys are unique. It's true: they're extraordinary people who have adapted to detachment from the world for months at a time, people who have learned to work and live next to others in confined spaces, people who have come to rely on each other like few can understand, people who silently sail into harm's way, people who give a new meaning to the words "good at what I do."

Soon, the riders will understand that this underwater chunk of steel is nothing without these guys; the submariners are everything. Consider this testimony:

"I was once in a situation on a sub where an unexpected incident on board placed everyone in jeopardy," said Fire Control Technician 1st Class (SS) Paul Rice, who has four sub tours under his belt. "No one had to think twice about what to do; everyone understood that extraordinary efforts were needed if we were to survive.

"This level of knowledge allows for a

perceived laxing of the conditions of rank on a submarine," said Rice. "But it's really just a raised level of respect that each is held to."

Some say the living space on a sub is in square feet the same size as a three-bedroom house. "And when you have about 120 guys jammed in there, you develop a certain amount of consideration and civility, or you just don't survive," Rice added. "Together the crew works as a single entity, and everyone does what they need to do as part of that entity."

The entity the visitors share now is the control room, where about a dozen men prepare for dive. At the "wheels" are Helmsman Fireman (SS) Jose A. Rivera-Coriano and Planesman Storekeeper 3rd Class (SS) Anthony Seaton standing by for orders. Soon they come: *Dive! Dive! Dive!* blares a voice over the IMC. Rivera-Coriano instantly reacts, pushing forward on the helm that controls the rudder (course) and fairwater planes (depth).

*Note to self: These two at the wheel are just past their teen-age years. They're driving a billion dollar sub. They're good. Confident. They've done this before.*

The huge fairwater planes, angled downward at 20 degrees, take their bite in

the water, and then, like a roller coaster passing its summit on a tall hill, everything starts to move forward and down.

The red digital depth gauge begins to click the increasing depth as fast as the angle indicator counts off the downward angle.

Gravity sends pens, paper and anything else not bolted down sliding. Some crew members grab the overhead hand railing with one hand, and nonchalantly catch airborne objects with the other. Yeah, they've done this before too.

Eighty feet. Ninety feet. One hundred feet. Deeper and deeper they go. The waves, 140 feet above us now, have long since disappeared. It's now quiet and calm.

"Make your depth one-eight-zero feet," orders the officer of the deck. "one-eight-zero feet, aye," repeats Rivera-Coriano. With uncanny timing, he gently pulls back on the "wheel" and almost magically levels off at exactly one-eight-zero feet.

"It took me about a month to get qualified in this position through underinstruction watches, a lot of training, and hours upon hours of studying," said Rivera-Coriano. "Driving a submarine is awesome, it's my favorite thing to do on



board, but it's hard to explain why."

Rivera-Coriano was modest about the responsibility he carries. "I don't feel overwhelmed with the responsibility of driving a submarine. Everybody has responsibilities on subs; I can't really say I have a greater responsibility than others."

"Great responsibility;" almost seems like an understatement. Most people Rivera-Coriano's age are tasked with the responsibility of a car, bank account or university class schedule; these submariners are charged with maintaining nuclear reactors and nuclear weapons, analyzing and interpreting electronic sonar signals, creating firing solutions based on sea environment and sub characteristics and determining trim based on extensive mathematics.

Responsibility runs high, and on a smaller fast attack submarine, or the larger *Trident* subs, there's not an instant during his tour that a submariner can escape its grasp. Like other Sailors, a submariner realizes to what extent an entire ship



Inside the dimly lit sonar room onboard  
USS *Alexandria* (SSN 757) STSSN Manuel  
Gallardo listens for contacts.

depends on him as an individual. In consideration of the protracted and distant operations of its forces, the Navy must place responsibility and trust in the hands of those who take the subs to sea.

Running deep and silent at 180 feet, the visitors make their way to the sonar room. Inside, four sonar operators – enlisted one and all – are tracking multiple contacts on the surface miles

away. With a flick of a switch, Sonar Technician (Submarines) 1st Class (SS) Scott Pitre switches the sound from headphones to stereo surround speakers for all to hear.

The chug, chug, chugging of a propeller fills the room, a freighter about 10 miles away.

"We listen for audible cues in this sound," describes Pitre. "We have certain



Each missile tube onboard  
USS *Louisiana* (SSBN 743) is  
painted a slightly different  
shade of orange. It adds to depth  
perception and the color relaxes  
submariners, say officials.



# Down **How do Submariners survive six-month stints underwater?**

**Psychological evaluating:** Before being considered for submarine duty, Sailors are carefully screened at Groton's Submarine school to weed out those with claustrophobia, personality problems and an inability to work with others. Since the cost to send Sailors to Submarine School is high, this screening process is done before school actually starts.

**Diet:** Forget all the bad things you've heard about Navy chow. Food is one of life's few pleasures when you're down deep, so the Navy sends highly-trained mess specialists to prepare fine cuisine. In short, the food keeps submariners happy. Lobster, steak and shrimp is not uncommon. Salad and snack bars, along with midnight rations keeps submariners happy. Thematic or "special" nights, such as "halfway" (halfway through a deployment), "divisional" (each division cooks) and sports recognition (Super Bowl, World Series, Daytona 500) are also commonplace.

**Soothing colors:** Orange colored bulkheads? On a Navy vessel? You can find them all on modern Navy submarines. Gone are the days when all interiors are haze gray. On *Ohio*-class subs, for

example, the vertical missile tubes in long narrow passageways are each painted a slightly different orange, which, according to officials, helps submariners "relax" and gives them depth perception. Submariners are also encouraged to pin up pictures of family and friends in their racks, which is the only private space each person enjoys on board.



**Port Calls:** To break up the monotony of six months underwater, a cruise will be broken up by numerous port visits to exotic locations.

**Entertainment:** Submariners "burn a flick" (watch a movie) nearly every night on the mess decks. Prior to deployment, submarines are given a case with 100 to 200 movies, many of which are so new they're not even in video stores. With the advent of video tape, movies get shown every place there's a TV or monitor. During meals, music is often played on the mess decks. Many submariners have Walkmans that they use in their private space — their racks.

**Work Hours:** Most Submariners stand watch for six hours, work for six more, then if there are no drills or evolutions requiring all hands, they get six hours of sleep. This 18-hour day routine is probably the best medicine to speed the six month deployment.

**Submarine Ombudsman:** Being away from family is difficult for many submariners. That's why the Navy has a group led by an ombudsman back at home base. The ombudsman organizes activities for the family members, and prepares newsletters and mail drops to keep their loved ones onboard the sub close in their hearts.

specific sounds we listen for that tells us what kind of contact it is. We listen to how the prop cuts into the water and based on that we can come up with a screwblade configuration and RPMs."

*"Yes, Petty Officer Pitre, but can you tell me how inversion reactor prebotts transfix spherical relationships within the stratosphere?"*

This guy, and most of his team, probably could.

Pitre moves the computer's cursor to another contact and dolphin squeaking fills the room. They're about 1,000 yards off our stern," says Pitre of the swimming creatures, who like the freighter 10 miles away, are oblivious to the fact that their noises are being tracked and analyzed by experts in a small blue-lit room.

To the landsman, other things about sub life remain "oblivious."

Like the crew schedule while underway, which switches from a 24 to an 18-hour day to accommodate a three section, six-hour watch cycle. Or the very mission of the subs: The fast attack subs, which provide a variety of missions and are a general-purpose submerged weapons platform and the SSBNs — the *Tridents* — which have a mission of carrying ballistic missiles capable of long-distance strategic strikes.

*Trident* subs have two crews. Typically, one crew will take the ship to sea for two months or so, then return. Both crews perform maintenance and repairs on the boat, then the other crew takes the sub to sea while the first crew undergoes intense training.

Fast attacks have only one crew. That crew takes the sub to sea and performs all maintenance and repairs.

Right now, a minor repair is needed in the area of the missile tubes, where something is vibrating abnormally. The clanking metallic noise immediately freezes four crew members who strain their ears in an attempt to pinpoint the noise origin. If they can hear it, the unseen "enemy" outside can too. Soon the culprit is found and silenced with a piece of duct tape.

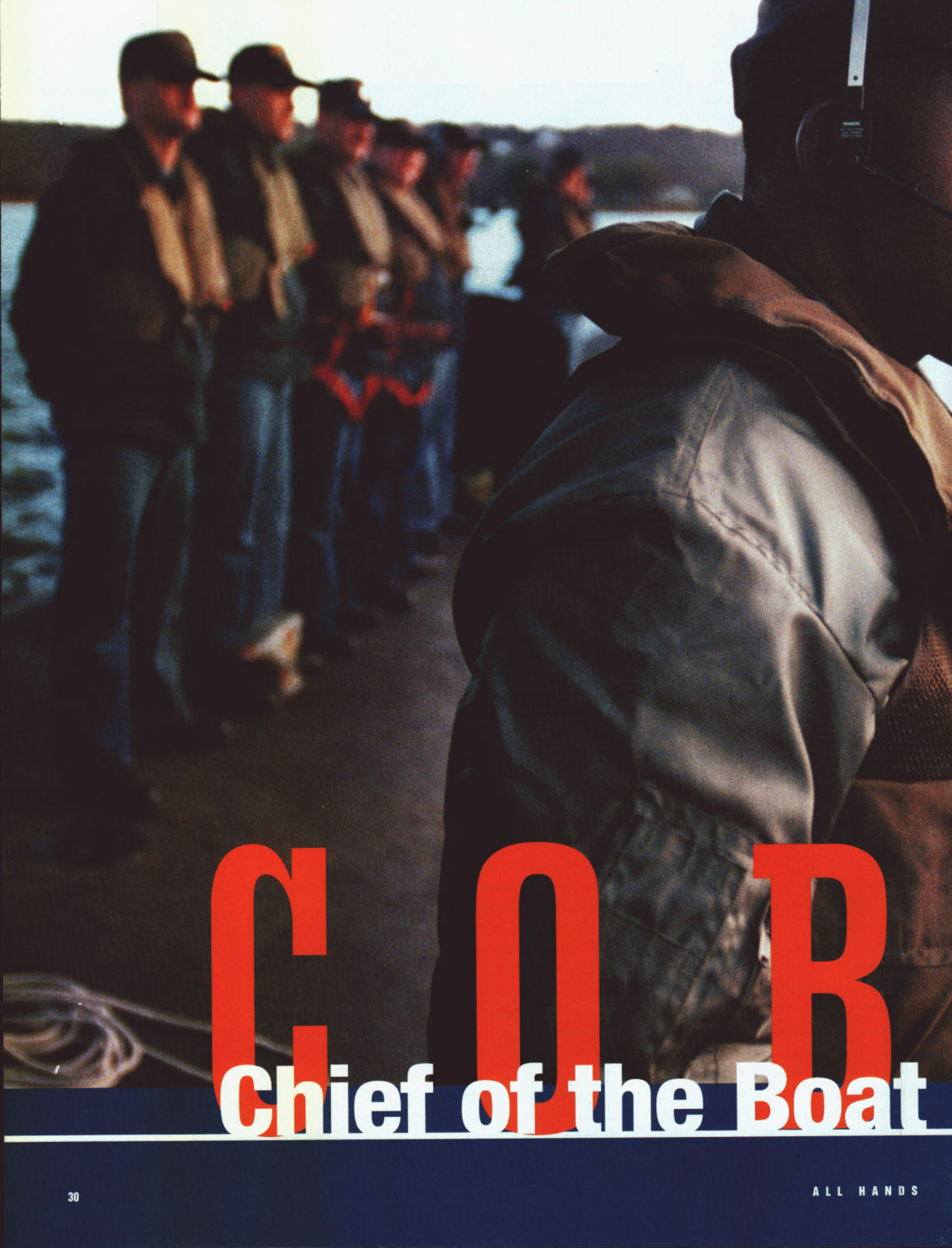
A parallel can be made here: The tape, like the sub crew, bonds and sticks together. It secures and becomes one. It pulls together and gets the job done.

It even sticks to what it's supposed to:

A noisy, vibrating panel for the tape; a heroic, unending mission for the submariners.

*Benson is a photojournalist assigned to All Hands.*





# COB

## Chief of the Boat





Story and photos by JO1 Robert Benson

## *Can you hear the laughter? Listen, closely...*

**T**here it is again, seeping up through the waves, originating in the tiny confines of the chief's quarters on board the submerged USS *Alexandria* (SSN 757). Step inside and you'll find four chiefs near tears from laughter, begging Reginald Brown to stop as he blithely saunters around the cramped room in an exaggerated, arrogant pose with thumbs in imaginary lapels and nose held high.

He rolls into a 10 minute, off the cuff, comedic monologue, complete with imitations, puns, exaggerated gestures and impersonations. Punch line after punch line work the chiefs into a frenzy. This isn't just laughter – it's roaring laughter. Many are buckled over, but Brown, as if reading from a script, continues his presentation. It goes on and on and on. No time outs.

On board *Alexandria*, it's known as the "Chevy Show," in honor of its host, Senior Chief Machinist Mate Reginald Jerome Brown, a.k.a. Chief of the Boat.

To his Sailors – all 120 of them – he's "the man." If they understand one thing, it's this: The COB is the man who makes things happen.

Size this person up as he does his comedic routine; take a close look. Note his uniform, pressed to perfection like the other chiefs around him; a habit formed during his 18-year naval career. Read his nametag, "Brown." If he had it his way it may read "Chevy," a nickname he earned while working as an auto mechanic before joining the Navy. Listen to him speak. Confident, outgoing; a voice that perhaps echoes the discipline he faced while being raised by a mother in the Army. Or maybe a voice that hints a sad note of loss, when he recalls memo-

ries of his brother, who was killed in Vietnam. Or is it an aching for his father, who had five heart bypasses one Christmas Eve long ago?

There's more too. See how lean he is. A contradiction to one of his favorite habits he claims to live for: Eating Wednesday night's 15 cent hot wings at the base Chief's Club, where he sometimes shows up for feasting in his gumby slippers. (Brown claims to be somewhat of a barracks rat, who happens to live in a room directly above the club.)

Estimate his height: 5 foot 8 inches; seemingly custom built for maneuvering through all those tight spaces on a sub. Even his mouth mike is telling; crackling as he talks, indicating he's in radio contact with other submariners in other parts of the 362-foot vessel.

For this person, to be any more revealing, he would need gills and a fin—which we could then attribute to the years – yes, years – he has spent underwater on numerous North Atlantic, South Atlantic and Mediterranean submarine deployments. Indeed, a silent study of the COB speaks volumes. But those who know Brown – and rest assured, every one on the sub knows him well – there's another story. Like one line movie reviews, they paint an even better picture of the COB.

*"His standards don't waiver,"* – Chief Electronics Technician John Borders.

*"He's firm, strong and fair at the same time,"* – Machinist Mate Fireman Apprentice Luis Vega.

*"He doesn't have a problem getting on the deck and cleaning with the rest of us,"* – MM2 Kent Warner.

*"I can't" isn't in his vocabulary; one of the best COBs I've had,"* – Warner.

And in the vocabulary of every submariner



on *Alexandria* are the words "automatic," a word the COB uses every day. "Automatic means everyone is ready for the next move," said Brown. "I'll ask someone how everything is going and they'll usually say 'It's on automatic COB.' That's what I like to hear.

"Everyone on this sub has a job," continued Brown. "I shouldn't have to tell a person where they should be and what they should be doing. They should be on automatic. When everyone is on automatic it's like a good Swiss clock, everyone is clicking. When we close the hatch, we have no one else. No sun, no stars, just ourselves to count on. If everything is not on automatic, that's not good."

Crew members have learned their lines well:

COB: "How you doing today?"

Submariner: "Automatic COB!"

Captain: "How's everything going with the crew COB?"

COB: "It's on automatic captain!"

The captain and the crew know what he means.

They also know what the COB means when he uses the word "roasted." It means to get a chewing. "It's my term for discipline," said Brown. "Not being on automatic torques me. If someone isn't where they're supposed to be – say, on a man overboard drill – then they're not on automatic. They get roasted."

Other chiefs acknowledge that Brown, "roasts meat daily."

But a mean nature isn't really in the guy's blood. Being nice is not necessarily a prerequisite for being a submarine chief of the boat, but with Brown it seems to be. During the ongoing "Chevy Show" we find him smiling all the time. "Off camera," as he makes his rounds through his submarine, his demeanor is usually not different. Normally, Brown will be smiling or pleasantly talking with a crew member. He claims always to have been a leader and not a follower. "I grew up with a [bunch] of brothers," said Brown. "You had to be a leader and outgoing in a family like that." He remembers the days before he joined the Navy, when he used to hang out with his friends, who always took Brown's lead. "In my group, if I didn't do it, nobody would do it. They followed me."

They still do today. On this boat, the COB focuses energy on helping those around him. Like the new submariner, 18 years old, who just checked on board and is not adjusting to the tight quarters and living conditions. "When new guys come on board they're just children, some of them," said the COB. "We all rally around that person and pick him up. I try to instill in the younger guys good traits and improve quality of life. The new guy needs to learn how to work in this environment. If something negative is happening in a

guy's life, I need to know that, because it may affect his job."

So, how does the COB keep tabs on 120 different people? He makes rounds. He appears to be everywhere and nowhere. One minute he'll be in the control room, another moment you can find him in the engine room; later he'll be on the mess decks. He also gets to the sonar room, the torpedo room, the radio room and other rooms on the sub. As Brown might say, he has more rooms than a hotel.

Another way he keeps in check with his crew? "I talk to them," answers Brown. "Not just 'Hi, how you doing?' but meaningful talk."

Like long lost buddies, Brown gets on level with whomever he's talking to, looks him in the eye and makes a genuine connection ("He knows how to make you smile," said one crew member). He may tell a sea story; one of his favorites is the moose story.

Like the comedic monologue he relayed earlier in the chief's quarters, he tells this one with just as much energy, this time in the torpedo room with a handful of gathered E-6s and E-5s. "I was topside on USS *Memphis* a few years ago, when I saw the craziest thing of my life," he recalled. "We were just moving along doing a few knots when I saw something alongside us in the water. I looked closer and couldn't believe my eyes: it was a big moose, swimming

"I'll find out if a guy doesn't have heat in his barracks room back at the base, or if another guy has a wife who's getting ready to have a baby. These are concerns I listen to and need to know."

Brown takes time to talk with crew members wherever he may be – this time in the sonar room. One of the COB's primary missions is to oversee the welfare and well-being of the crew.







With exaggerated gestures, Brown tells one of his many sea stories to a gathering of chiefs.

right alongside of us. I reported it to control and they didn't even believe me!" Quietly, everyone listening remained engrossed in his story.

Sometimes, just as quickly as he begins a conversation, he'll end it and suddenly question the well being of a crew member, asking leading questions. "I'll find out if a guy doesn't have heat in his barracks room back at the base, or if another guy has a wife who's getting ready to have a baby. These are concerns I listen to and need to know."

His listening allows him to instantly put a finger on the state of the crew, at any time. He knows how to spot subtle nuances of the crew's temperament. He knows without asking, for example, that the crew onboard *Alexandria* would rather go to sea than stay in port, because there, he says, they know their days are structured. He knows the biggest problem for many young submariners on his sub is lack of time management skills.

Brown says he's always treated with

respect when he walks on board the sub. Of course, off the sub is a different story – especially on the basketball court. "When it comes to basketball, he has a lot of talk," said MMFN Luis Vega, referring to the COB. "He talked and talked about his game on the court, but once we finally got him on [a basketball court in Florida during a port visit] we blew him out of the box. He has no game. He was throwing more bricks than a bricklayer. We have no mercy on him."

Vega was quick to add though, that he feels Brown is a good motivator who keeps on top of things. "He's straight and always tries to improve crew morale."

Other crew members see different positives. "Our COB is a people person," said MM2 Kent Warner. He knows how to make people smile and get on your good side. He also stands up for you and sets high standards."

Some chiefs on board respect Brown's unwavering firmness. "We're transitory by nature and we need a baseline to operate

from," said ETC Borders. "It's very comforting knowing that he will hold that baseline. Other COBs could waiver with the political climate set by the XO and CO. This COB doesn't."

Like a strong father he holds firm.

To those on board *Alexandria*, this man Brown – winner of the Dennis Sultz Memorial Leadership Award, inspirer and leader, denier and grantor, fixer and healer – this man Brown, perhaps, is just that – a father.

Or maybe this man Brown, wannabe Jay Leno, is just someone who helps the crew smile and stay focused after 150 days underwater.

Or perhaps, this man, host of the "Chevy Show," is just a person who has found his calling as Chief of the Boat.

Now hit the lights and roll the camera; this man's ready for action.

*Benson is a photojournalist assigned to All Hands.*





# The FIXER

**Sub Tenders like USS *McKee* provide critical support for the submarine fleet**

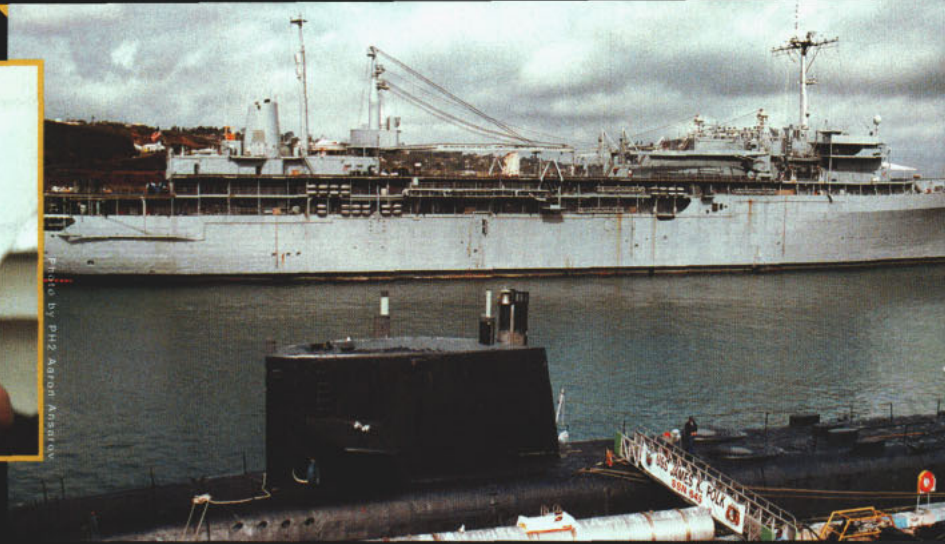
By JO2 Stacey Moore

HT1 David Brandenburg silver brazes a fitting for a submarine's air bank on board USS *McKee*.





Petty Officer 2nd Class Nonah Hadnot is a Hull Technician on board USS *McKee*.



USS *McKee* (AS 41) pierside in San Diego.

Photo by PH2 Aaron Ansarov

USS *McKee* (AS 41) is a mobile support and repair facility with the capability of providing simultaneous repairs to 12 nuclear-powered, fast-attack submarines. A versatile and complex ship, she provides everything a submarine might need: full medical and dental facilities; cranes, elevators and conveyors to move material on and off the ship as well as between decks; large storage areas for refrigerated and dry food; nuclear system repair and testing; electrical and electronic repair; hull repair; sheet metal and steel work; pipe fabrication; foundry work; woodworking; printing; underwater diving and rescue; hazardous material management; and propulsion and weapons systems repair.

Most of *McKee's* men and women are involved with the repair and maintenance of submarines, from replacing deck tile to troubleshooting system components. Engineman 3rd Class Sonya Thomas says it's a tight fit sometimes, "When you compare the size of sub compartments and passageways to those on *McKee*."

Those tight spaces can make even the simplest job difficult. But *McKee's* Sailors gain satisfaction from doing their job well. "You feel a sense of pride when you get done with a hard job," said Machinist's Mate 3rd Class Cathy Green, of Greenbelt, Md.

"And knowing you did it right." According to her crew members, innovation and efficiency are hallmarks of *McKee's* success as a submarine tender. The ship was involved in more sub repair periods last year than at any other time in her history – 63. You might think a schedule like that would keep her crew pretty busy. It did – and does – but crewmembers still found time to develop and execute a comprehensive plan to stand up a Shore Intermediate Maintenance Activity Submarine Maintenance Detachment (SSMD), a measure they felt was necessary to ensure quality submarine maintenance following *McKee's* inactivation this fall.

To staff the SSMD, the Navy is pulling personnel from *McKee's* crew as well as the rest of the fleet. After *McKee* is inactivated in September, USS *Simon Lake* (AS 33), homeported in Italy, and USS *Frank Cable* (AS 40) in Guam will be the only deployable submarine repair ships in the U.S. Navy. Shore-based facilities, such as the one established by *McKee's* Sailors, will maintain and repair submarines.

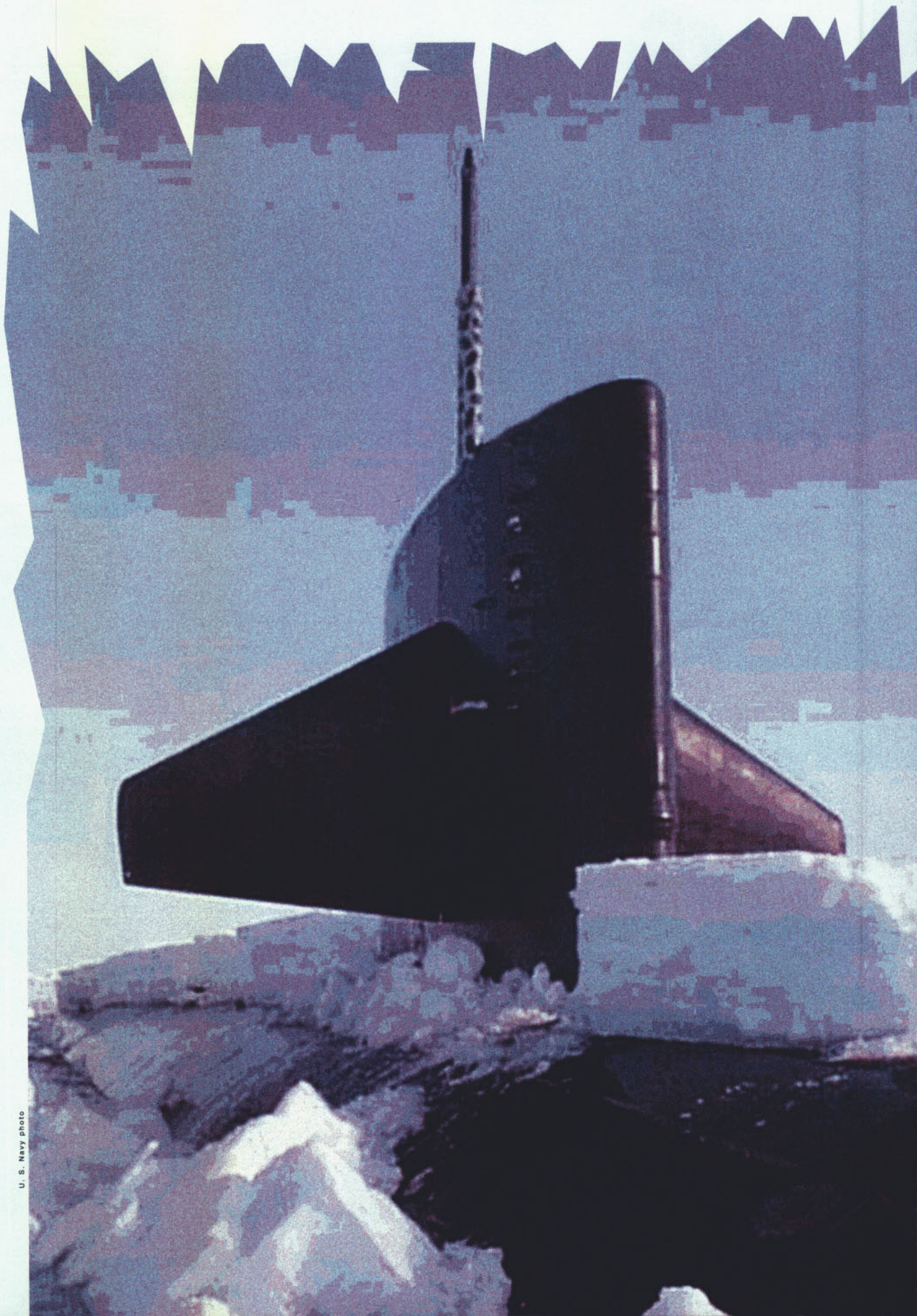
*Moore is a journalist assigned to USS McKee. PH2 Aaron Ansarov is assigned to the Fleet Hometown News Center, San Diego.*



Petty Officer 3rd Class Thuy Bu, a Machinist's Mate on board USS *McKee*, removes the boiler internals.



U. S. Navy photo





A team of Navy and civilian research scientists recently got underway aboard the Pearl

Harbor-based fast attack submarine USS *Hawkbill* (SSN 666) for the fourth of five submarine Arctic science expeditions (SCICEX) conducted to collect information about the Arctic region. *Hawkbill* deployed to the top of the world for 42 days with a team of two Navy and five civilian scientists. The ship was converted into a research laboratory housing specialized collection gear, sonar scanners and remote video cameras and monitors.

The SCICEX program is a result of the 1994 agreement between the U.S. Navy and the civilian science community that called for five submarine deployments to the Arctic. According to Barry Campbell, head Arctic advisor for SCICEX '97, "The Arctic Ocean is the least explored ocean on the planet."

CDR Bob Perry, *Hawkbill's* commanding officer, said 12 of the ship's torpedoes were offloaded to make room for the equipment and convert part of the forward torpedo room into bunk space for the scien-

tists. Perry added, however, that the 292-foot-long *Hawkbill* remained a fully functional warship throughout the scientific expedition.

"The *Sturgeon*-class submarine was built especially to work under the ice caps of the polar regions, hunting Russian subs during the Cold War," said Perry.

Jeff Gossett, director of fleet operations for the Navy's Arctic Submarine Laboratory in San Diego, said the purpose of the five submarine Arctic scientific cruises is to take teams of civilian scientists to the Arctic to gather data that only a submarine can provide unhindered by the ice. The results of the experiments and sampling will benefit both the civilian and military communities.

One of the phenomena scientists are interested in during SCICEX '98 is the temperature change in certain parts of the Arctic Ocean. Another major task includes geophysical surveys of the ocean floor to map a virtually uncharted region of the world.

"Since the program began, we have almost doubled the information we have on the Arctic," said Gossett.

*Ames is assigned to Commander, Submarine Pacific public affairs.*

USS *Hawkbill* (SSN 666), a *Sturgeon*-class fast attack submarine originally built to hunt Soviet submarines operating beneath the polar ice caps, escorted a team of research scientists from Pearl Harbor to the North Pole in support of SCICEX '98.



# 'DEEP BLUE'



ET1(SS/DV) James A. Henson and  
ETC(SS/DV) Donald B. Jones examine  
*Avalón's* thrusters as they go through  
the pre-dive checklist.



# Angels

**Though few in number, deep submergence rescue vehicles provide an insurance policy for submariners all over the world.**

Confusion led to panic, and panic to fear as water poured into the hull. Though the Sailors worked feverishly to stop the flooding, it eventually became clear to all aboard that this was the end. Thirty-five years ago, USS *Thresher* (SSN 593) sank to the bottom of the ocean, taking her entire crew with her. It was a tragedy like none other in U.S. naval history, made all the more poignant by the fact that no one could even attempt a rescue back then. One day, that would all change.

Experts still speculate about the exact cause of the tragedy April 10, 1963, off the coast of New England. But it didn't take long for the Navy to realize there was a need for something that would prevent such a terrific loss from happening ever again. Thus was born the Deep Submergence Rescue Program and a pair of vehicles, *Avalon* and *Mystic*, that could dive thousands of feet below the ocean's surface and rescue stranded submariners like angels from above.

In the darkened middle sphere of *Avalon's* closet-like confines, Machinist's Mate 2nd Class (SS/DV) Shane D. Swenson pauses as the small submarine slowly dives.

"It's a dangerous business. I don't know of any [submariner] who hasn't had a scary experience and wondered about

being trapped at the bottom of the ocean," he said. "But that's what we train for."

Training is what they do best. Working from their base at Naval Air Station North Island, San Diego, *Avalon* (DSRV 1) logs several deep-water dives each week off the Southern California coast from the research support ship *Dolores Chouest*.

"We're constantly in the water, always improving our skills and learning how to

work as a team, so that if we should ever have to make a rescue, we won't hesitate," said Chief Electronics Technician (SS/DV) Donald B. Jones. As one of the boat's few pilots, Jones knows as much about training as anyone on the team.

They're a small crew, numbering less than 20, so they place an extreme value on the ability of every member to take on any responsibility. Becoming a pilot is the aspiration and privilege of every crew



Right: STS1(SS/DV) Robert Palek gets a shower under the belly of *Avalon* as he does a pre-dive check of the robotic manipulator arm.

Below: ET3(SS) Michael R. Hillyard and MMC(SS) John R. Morris ride *Avalon* through the swells as she's towed in to *Dolores Chouest's* elevator.



member, and some, like Jones, have spent years exploring every inch of the boat and performing every role possible to get a chance to sit in the pilot's chair.

"New crew members spend most of their time qualifying on every system the boat has," he said. "When safety's at a premium, that's the only way we can be sure we're diving safe."

During a pre-dive brief, Officer-in-Charge, LCDR William E. Fultz cites a malfunction on a previous dive by stressing the point.

"I want to see all of you checking and double checking each other's systems. We've got to be looking out for each other so there are no mistakes," he said.

On the stern of *Dolores Chouest*, it's obvious his commands are well heeded, as crew members crawl on and around the small sub's green fiberglass hull inspecting and re-inspecting hundreds of components before the next dive.

Later, *Avalon* rests on a steel plate anchored to the ocean floor in a training area called "Deep Seat". Once the skirt, a small open bell connected to *Avalon's* belly, is sealed to the plate and the pressure is equalized, Swenson opens a hatch to reveal a first-hand look at the bottom of the ocean.

**"We're constantly in the water, and we're constantly learning skills and learning to work as a team so that if we should ever have a rescue, we won't hesitate." – ETC**



"If this were a rescue, we'd be sealed to the hull of the submarine, and you'd see a hatch down there," he said. "After a few tests to see if there's no danger on the other side, we'd open the hatch and bring the submariners up into *Avalon*." The rescue submarine can carry up to 24 tightly packed Sailors in two of its three small spheres

"I can't imagine what it would be like if we really had to make a rescue," said Swenson. "But we have done many exercises where we mate up with submarines. It's a pretty good feeling of accomplishment when you open the hatch and see the crew's faces," he said.

It's most likely submariners who get a look up into that hatch get a good feeling, too. While the role of submarines in the Navy is indispensable and there haven't been any tragic submarine accidents since the 1960s, it's still considered one of the most dangerous jobs in the sea service. But as long as there are a few submariners willing to train for the unthinkable, and vehicles like *Avalon* can take them to the rescue, it seems a whole lot safer.

*Furry is a San Diego based photojournalist assigned to All Hands.*



Above: The safest way to bring the divers back aboard the support ship is with an easy ride up on the elevator.

Right: MMC(SS) John R. Morris watches the pre-dive checklist and anticipates the challenge of his assignment topside while the boat's being launched.



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SS/DV) Donald B. Jones



# CyberSailor

## Subs, Subs and More Subs

**T**his month we took a look at submarines and the men who sail in them. So naturally I just had to search the web for cool submarine sites.

The first stop on our tour is the Public Broadcasting Service documentary called "Secrets, Submarines and Spies" located at [www.pbs.org/wgbh/nova/subsecrets/](http://www.pbs.org/wgbh/nova/subsecrets/). Go in search of clues to two tragedies of the Cold War, the wrecks of the nuclear submarines USS *Thresher* (SSN 593) and USS *Scorpion* (SSN 589). Lead yourself on a virtual tour through their active nuclear submarine with 360-degree views. Find out what it feels like when your submarine launches a ballistic missile. Then go below test depth, earn your "Dolphins" or listen to former submarine Sailors tell of life under the sea.

Another great sub site is <http://gulftour.tamu.edu/>. This site allows you to follow scientists on a research

mission in the Gulf of Mexico and learn all about the Navy's smallest submarine, NR-1. It also has an e-mail address to ask scientists a question.

Answering questions is what the American Museum of Natural History loves to do for its online visitors. Located at <http://www.amnh.org/>, it has information and links to various underwater creatures, like the giant squid exhibit that actually holds a live 10-foot-long squid caught off the coast of New Zealand.

So between the seaweed, subs and squids, April should be another great month, thanks to the great research of CyberSailor.

*Cyber Sailor*



<http://www.amnh.org/>

## Undersea Sites

Thanks to the military editor of *Undersea Warfare* magazine, LCDR Jim Doody, here are some other great submarine sites available for your surfing pleasure. Even though they didn't win a CCSOE award, these sites do provide good information and links about the silent service:

The official submarine centennial website at [www.navsea.navy.mil/Submarine-Centennial/sub100.html](http://www.navsea.navy.mil/Submarine-Centennial/sub100.html).

The Navy N87 submarine site at [www.chinfo.navy.mil/navpalib/cno/n87/n87.html](http://www.chinfo.navy.mil/navpalib/cno/n87/n87.html)

The Commander Submarine Force Atlantic at [www.norfolk.navy.mil/sublant/homepage.htm](http://www.norfolk.navy.mil/sublant/homepage.htm)

The Commander Submarine Force Pacific at [www.csp.navy.mil](http://www.csp.navy.mil)

The Commander Submarine Group 2 at [www.csg2.navy.mil](http://www.csg2.navy.mil)



[www.navsea.navy.mil/Submarine-Centennial/sub100.html](http://www.navsea.navy.mil/Submarine-Centennial/sub100.html)



# SUBperb Performance

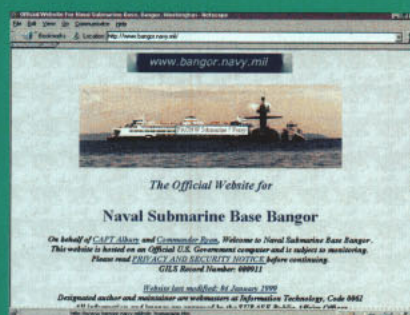
This month's CyberSailor Site of Excellence (CSOE) goes to two fast and up-to-date web sites related to submarine bases in the Navy.

The first place winner is Commander Submarine Development Squadron 12 at Submarine Base New London, Conn., [www.devron12.com](http://www.devron12.com). This site loads fast and gives in depth information on its submarines, thanks to webmaster

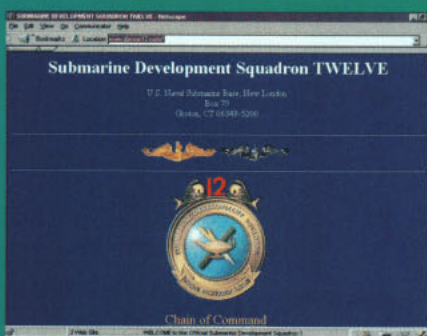
Senior Chief Yeoman (SS) J.R. Smith who

faithfully updates the site for the Sailors stationed at New London. The second place winner is just as good but narrowly missed first place at [www.bangor.navy.mil](http://www.bangor.navy.mil). The webmasters, D. Mircheff and A. Charpentier, have done a good job at updating and maintaining a list of local websites, interesting links and relevant information on the base and area.

So if you are stationed or transferring to either location, stop by and do some sub surfing first.



[www.bangor.navy.mil](http://www.bangor.navy.mil)



[www.devron12.com](http://www.devron12.com)

The Submarine Base Kings Bay at [www.subasekb.navy.mil](http://www.subasekb.navy.mil)

The Commander Submarine Group 10 Kings Bay, along with links to Group 16 and 20 at

[www.subasekb.navy.mil/csgpage.htm](http://www.subasekb.navy.mil/csgpage.htm)



<http://gulftour.tamu.edu>

The Trident Training Facility, Bangor at [www.ttf.navy.mil](http://www.ttf.navy.mil)

The Naval Submarine School at

[www.cnet.navy.mil/newlongdn/nss.htm](http://www.cnet.navy.mil/newlongdn/nss.htm)

*The appearance of commercial websites in All Hands does not imply endorsement by the Departments of the Navy or Defense.*



# Eye on the Fleet

EYE ON THE FLEET

is a monthly photo feature sponsored by

the Chief of Information Navy News Photo Division. We are looking

for **HIGH IMPACT,** quality photography from **SAILORS**

in the fleet, to showcase the American Sailor in **ACTION.**

## FIREWORKS

HTC William Cooper from Buffalo, N.Y., brazes a saltwater eductor in the pipe shop on board USS *Harry S. Truman* (CVN 75).

Photo by PHAN Justin E. Bane

## LIGHTS IN THE DARKNESS

Rescuers find victims in the rubble and dust of a collapsed building during disaster readiness training.

Photo by PH2 Lou Messing



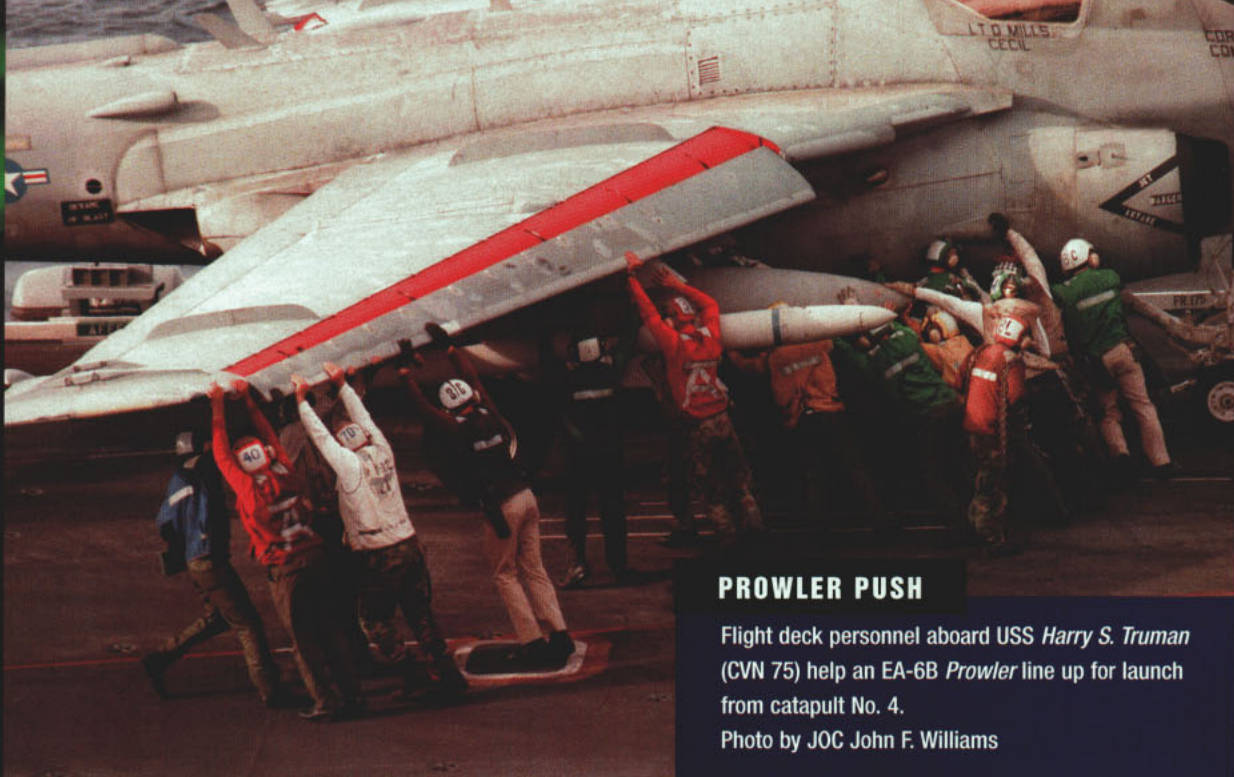
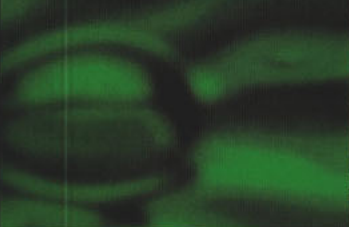
## BIRD OF PREY

A *Sea Sparrow* is launched from the aircraft carrier USS *Harry S. Truman* (CVN 75) to destroy a BQM-74E drone during NATO certification.

Photo by PHAN Justin Bane







### **PROWLER PUSH**

Flight deck personnel aboard USS *Harry S. Truman* (CVN 75) help an EA-6B *Prowler* line up for launch from catapult No. 4.

Photo by JOC John F. Williams



### **NIGHT WATCH**

A seaman stands starboard lookout watch during an evening underway replenishment in the Arabian Gulf.

Photo by PH1 Gregory Pinkley



To be considered, forward your images with full credit and cutline information, including: full name, rank and duty station. Name all identifiable people within the photo and include important information about what is happening, where the photo was taken and the date.

Commands with digital photo capability can send attached .jpg files to: [navynewsphoto@hq.navy.mil](mailto:navynewsphoto@hq.navy.mil).

Mail your submissions to:  
NAVY NEWS PHOTO DIVISION  
NAVAL MEDIA CENTER,  
2713 MITSCHER RD., S.W.  
WASHINGTON, D.C. 20373-5819



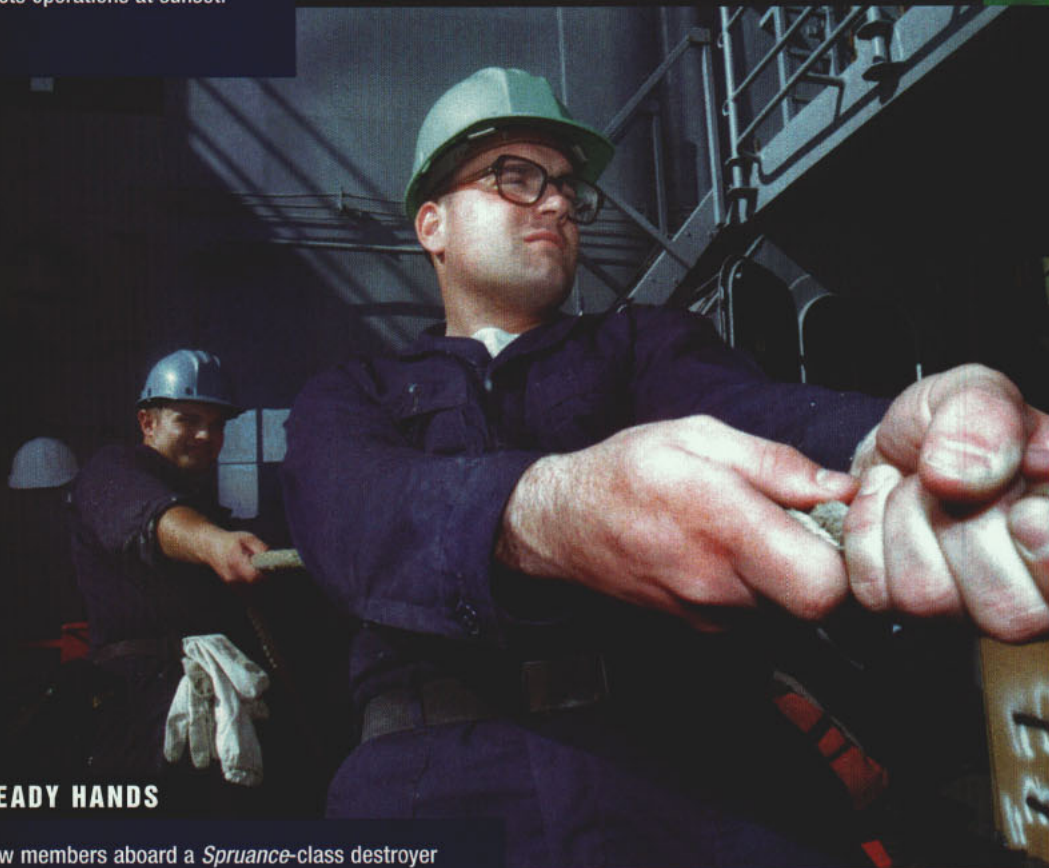
# Eye on the Fleet



## SUNSET SILHOUETTE

An SH-60 *Seahawk* conducts operations at sunset.

Photo by PHAA Jon Cobb



## STEADY HANDS

Crew members aboard a *Spruance*-class destroyer steady the commanding officer's gig as it is hoisted back to the weatherdeck.

Photo by PH1 Todd Cichonowicz





## POSTAL PROCESSION

Crew members of an *Arleigh Burke*-class destroyer form a working party to offload mail.

Photo by PH1 Todd Cichonowicz

## QUICK FIX

AN Tracy Pipes of Gatlinburg, Tenn., performs a daily inspection on an EA-6B *Prowler* of Tactical Electronic Warfare Squadron (VAQ) 135 on board the aircraft carrier USS *Carl Vinson* (CVN 70).

Photo by PHAN Jose Cordero





# Shipmates



**Aviation Electrician's Mate Airman Gabe Spagle** stationed at NAS Lemoore, Calif., was recently recognized for his efforts in rescuing an 86-year-old handicapped man from a burning house. Crawling into the burning house on his hands and knees, Spagle risked life and limb to search for the injured man and reentered the burning house to search for the man's wife. Spagle did not know the woman was not at home but he was unharmed in the rescue.



**Yeoman 3rd Class Dwayne M. Hicks** was recently selected as Training Air Wing 5 Helicopter Training Squadron 18's Junior Sailor of the Quarter (third quarter 1998). Hicks was selected for his outstanding performance and devotion to duty, both military and professional.



**Machinist's Mate 1st Class (SW/AW) Jon C. Heidke Jr.** was selected as USS *Enterprise* (CVN 65) Senior Sailor of the Quarter for his extraordinary initiative and ability in becoming qualified as leading chief petty officer in the aircraft carrier's RM Division No.1 Propulsion Plant Auxiliaries. Heidke is a Senior Enlisted Watch Officer and watchbill coordinator for 100 machinist's mates aboard *Enterprise*.



**Radioman 1st Class Karla A. McGhee** was selected as United States Military Entrance Processing Command's 1998 Military Member of the Year. McGhee, the student testing database manager, introduced command personnel to the Computer Adaptive Test version of the Armed Services Vocational Aptitude Battery, or CAT-ASVAB. McGhee also works with the local Lend-A-Hand program.

## On assignment

For many, Groton Submarine Base is to Connecticut what Pensacola Naval Air Station is to Florida. One is the Navy's air hub, the other the Navy's sub hub. And at this Northeastern hub, there was a pool of talent which the staff at *All Hands* relied upon for information, photographs, stories and access for our submarine issue.

Photographer's Mate 2nd Class Alan Warner shot our museum story in the "Around the Fleet" section (see Page 8). "The power of perseverance will always triumph in the end as long as you never consider quitting," said Warner, who shot numerous images. Equally unwavering in providing excellent assistance were the crew members of USS *Alexandria* (SSN 757), the students and staff at the Basic Enlisted Submarine School and the consolidated public affairs staff at Groton.



U.S. Navy photo

## Did you know?

**The First Underwater Mine** was invented about 1771 by David Bushnell, an American from Connecticut. It would be carried beneath an enemy hull by a small submersible boat (also invented by Bushnell) and attached to an enemy ship by a drill. The explosion would be triggered by a timing device. The device was used successfully during the Revolutionary War to blow up a British schooner.

**The First Nautilus** was created by Robert Fulton and launched in Paris, July 24, 1800. She was built of wood with iron ribs and was completely covered with copper. Driven by hand-cranked propellers, diving and rising were made possible by flooding special tanks, then expelling the water by means of a pump. Her underwater speed was one knot.

**In Early Submarines**, the oxygen level was indicated by a candle, which also provided light.

**The First Submarine to Sink** an enemy warship was the Confederate submarine *H.L. Hunley*. She sank the Union warship *Housatonic* Feb. 17, 1864, off the coast of Charleston, S.C. *Hunley*, unfortunately, was unable to sail away from *Housatonic* and the shock wave took her down as well.

**Torpedoes** are named for a type of fish capable of paralyzing its prey with an electrical shock.

**The First U.S. Submarine** was USS *Holland*, built in 1900. She had a speed of 7 knots surfaced, made possible by her 45-horsepower internal combustion engine. By 1914, the United States had 38 submarines.

**During World War II**, U.S. submarines accounted for about 60 percent (more than 1,300 ships) of Japanese tonnage sunk, yet the submarine strength at that time was less than 2 percent of the U.S. fleet.





any  
day...

**A**ll Hands wants quality photographs that capture Sailors, Marines, Navy civilians, Naval Reservists and their family members at work and at play – performing those daily tasks that contribute to mission accomplishment. The shoot has been extended to encompass an entire week to allow commands more flexibility. Selected photos will be published in the October 1999 issue of *All Hands*.

Photographs taken should reflect the diversity of both people and capabilities in the U.S. Navy and must be shot during the week of Sunday May 23 through Saturday May 29, 1999. Photos depicting safety or uniform violations will not be considered. The best shots tend to be candid and unrehearsed, displaying the imagination and creativity of the photographer.

All submissions must include full credit information (see below). Captions must be attached individually to each photo or slide.

To be considered, photos must be received at *All Hands* by July 5, 1999. Photos will not be returned. Submit processed and mounted color slides, or quality color prints, either 5x7 or 8x10. Digital images will also be accepted with a minimum pixel size of 2,000 X 1,200 (approximately 5X7 at 300 dpi). Digital images can be submitted on a zip disk with cutlines and photo credits embedded. Zip disks will not be returned.

Commands with digital photo capability can send attached .jpg files to Chief of Information Navy News Photo Division at [navynewsphoto@hq.navy.mil](mailto:navynewsphoto@hq.navy.mil). The subject line for all such submissions should read: Any Day Submissions.

Mail submissions to: Naval Media Center, ATTN: All Hands Photo Editor, NAVSTA Washington, Anacostia Annex, 2713 Mitscher Rd., S.W., Washington D.C 20373-5819. Be sure to mark all packages as "Any Day Submissions."

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Photocopy this form and attach a completed copy to each photo you submit.

**Photographer Information:**

Name: \_\_\_\_\_

Rank: \_\_\_\_\_

Duty station (include mailing address and phone number): \_\_\_\_\_

Home phone number: \_\_\_\_\_

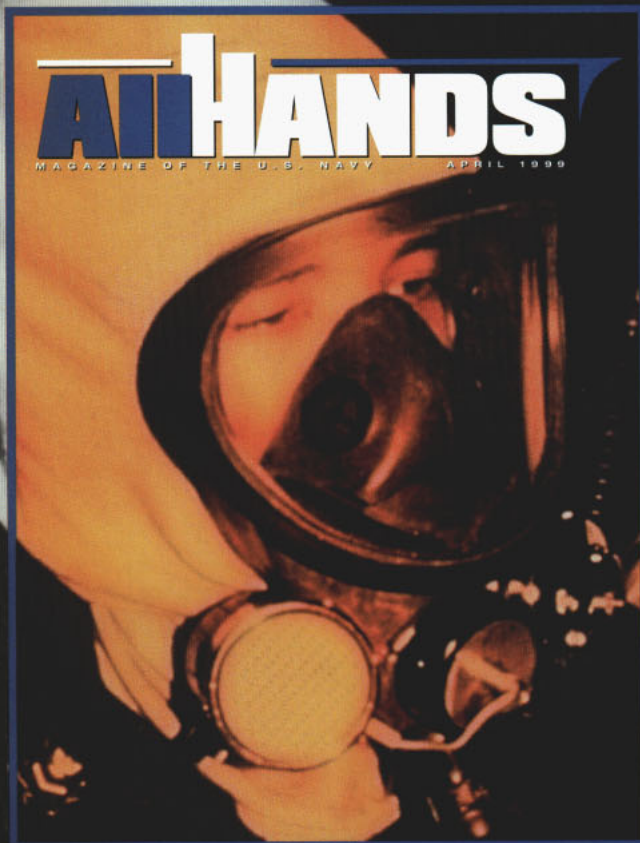
**Photograph Information:**

Where was the photo shot: \_\_\_\_\_

Caption (what is happening in the photo): \_\_\_\_\_

Persons pictured (include first and last names, ranks/rates, warfare designations and hometowns): \_\_\_\_\_





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